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POTAWATOMI IV: PARTICLES AND SAMPLE TEXTS[1]

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8. Numeral Stems
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8. Numeral Stems. We list first the numeral stems and the equivalent independent forms of the numbers from one to ten:

1	√nUkOt	nkot
2	√niš	niš
3	√nUs·	ns·wu[2]
4	√nyew	nyew
5	√nyanUn	nyanun
6	√nUkOtwatUs·	nkotwats·o
7	√no?Uk	no?uk
8	√šwatUs·	šwats·o
9	√šak	šak
10	√mUtatUs·	mtats·o

The independent forms in each case, despite morphophonemic irregularities, we take to be morphemically identical with the stems, whereby the stems are free forms.

8.1. When medials or finals follow no?Uk *seven* and √šak *nine*, including those which make multiples of powers of ten, the stem is followed by word juncture and an element tUs·, to which the medial or final is appended with close juncture. Before medials or finals with initial √w/, √nyew *four* loses its final √w/; and √nyew manifests some other peculiarities, detailed below.

8.2. Cardinals 20, 30, and 40 have suffix wapUt·Uk: nišwapt·uk, ns·wapt·uk, nyewapt·uk. Cardinals 50 through 90 have suffix omUtUnUnU ✱, presumably the same morpheme despite its different shape: nyannomtunnu, nkotwats·omtunnu, no?uk ts·omtunnu, šwats·omtunnu, šak ts·omtunnu.

Cardinal hundreds have suffix √wak/, without connectivé √U/[3]: nkotwak, nišwak, ns·wak, nyewak, nyannwak, nkotwats·wak, no?uk ts·wak, šwats·wak, šak ts·wak.

Cardinal thousands have suffix os·Uk: nkotos·uk, nišos·uk, ns·os·uk, nye?os·uk (the morphophonemics are regular: see **2.22**, 2), nyannos·uk, nkotwats·os·uk, no?uk ts·os·uk, šwats·os·uk, šak ts·os·uk.

Compound cardinal numerals, involving multiples of more than one power of ten, begin with the multiple of the highest power and work downwards; to each multiple but the first is prefixed, with word juncture, an element šUt, šUč, or šUš: before the stems for *one* and *seven* the form is šUč, before *eight* and *nine*, šUš, and elsewhere šUt. So the final part of a compound numeral (the unit position) is one of the following: šuč nkot, šut niš, šut ns·wu, šut nyew, šut nyanun, šut nkotwats·o, šuč no?uk, šuš šwats·o, šuš šak; if the last part is *ten*, it is šut mtats·o. A typical compound numeral: no?uk ts·os·uk šut ns·wak šut nišwapt·uk šuč nkot *7321*.

8.3. The final √k/ occurs in forms with the meaning *so-many-times*: nkotuk *once*, nišuk, ns·uk; šak ts·uk *nine times*; šwats·wak ts·uk *eight hundred times*.

[1] For **1–3** see IJAL 14.1–10; **4–6** IJAL 14.63–73); **7** IJAL 14.139–149 (all 1948). The reader is reminded that the term PARTICLE is defined negatively: forms which do not fall clearly into the paradigmatic patterns of the noun or verb type are particles.

[2] Perhaps ns·we; see Potawatomi II, fn. 5.

[3] See **2.22**, 1.

8.4. The final oškUn means (*so-many*) *bagsful*: ns·oškun *three bagsful*; mtats·o šut nišoškun *twelve bagsful*.

The final √wapyek/ means (*so-many*) *pieces*: ns·wapyek *three pieces*.

The final tUpU?UkUn, replaced by UtUpU?UkUn after a numeral stem higher than four, means (*so-many*) *miles* or *yards*: nyannotpu?kun *five miles* or *yards*. nUkOt loses its final √t/: nkotpu?kun *one mile*. In some cases there is word juncture: niš tpu?kun *two miles*. *Four miles* is nyew? tpu?kun, not regular for either internal or external morphophonemics.[4]

The final tUpU?Ukas· or UtUpU?Ukas·, alternating as in the case above, and formally a diminutive thereof, means (*so-many*) *o'clock*; irregularities are as above: mtats·o šuč nkotpu?kas· *eleven o'clock*.

The pre-European meanings of the above forms—if they existed in earlier days—are unknown.

The final kUwUn (with replacement of the form *kuwn by /kon/) means *for so-many years*:[5] nkotwats·okwun *for six years*.

The above formations are all morphologically particles. Syntactically, some of them parallel the behavior of nouns (see samples in the texts: I43, 46, 84, 90). Those for *so-many times* and the like remind one of the numeral-measure construction in Chinese, or even more in Japanese.

8.5. Cardinal numerals have either cardinal or ordinal meaning. A separate set, having only ordinal meaning, consist of √?ek·o/ plus a numeral higher than one: ?ek·oniš (or ?ek·o niš?) *the second*. For *the first* one uses other elements: wškuča or net·um.

8.6. An *ii* verb, *it is so-many years ago*, is formed with final kUwUnUkUt (with replacement of *uw by /o/ as with kUwUn *for so-many years*, above); this form is used mainly in conjunct: nektwats·okwunkuk *it being six years ago*.

9. Pronouns. In addition to the independent personal pronouns (**5**), there are two other pronominal elements which share, at least partially, in noun-type morphology, and a number of particles which are syntactically pronominal, though uninflected.

9.1. There is a set of DEMONSTRATIVES which consist of an alternant of a nominal inflectional ending (including the locative) followed by a stem /o/ or /i(w)/. The alternants of the nominal inflectional endings appear here as prefixes: √*zero*/, with stem-alternant /o/, giving form ?o (the /?/ is automatic in word-initial) *3*; √n/, with stem-alternant /i(w)/, giving ni(w) *3′*; √k/, giving ki(w) *35*; √*zero*/ with stem-alternant /i(w)/, giving ?i(w) *0*; √n/, giving ni(w) *05*; and √š/, giving the locative ši(w). The prefixed alternants of the usual suffixes are identical in phonemic shape with the suffix forms save for √š/.

The meaning of the stem is *vague identification* or *slight emphasis* (see texts, I2 and passim).

With the stem-alternant /o/ throughout, and a further element /tu/ suffixed, the meaning is that given plus *here or there in sight*; the full forms are ?otu, notu, kotu; ?otu, notu; šotu. Thus ?o k·we *the woman, a woman, a certain woman* : ?otu k·we *this woman here, that woman there*.

9.2. The form wuye *someone* (animate only) appears optionally in a form wuyeyun for *3′*, wuyeyuk *35*; but the simple form

[4] Bloomfield reconstructs the independent word for *four* in PA as nyeewwi. This would give Pot. *nye?w, which does not occur; the form nyew? in this position may trace back to such a form, levelled out to nyew in other cases.

[5] In this case and in a few others (e.g., ntokumam *my chief*, if one could postulate a parent form PA netewekimaama; see Pot. I, fn. 3), there is evidence of a historical shift and of a morphophonemic correspondence of preconsonantal /uw/ and /o/; it is quite possible that I have heard incorrectly in recording the two as distinct.

appears also in contexts where one might expect the paradigmatic endings.

9.3. Other syntactically pronominal forms are uninflected. A form ?ako parallels the demonstratives (**9.1**) syntactically, with the meaning *distal-visible*. Some forms appear to be classifiable definitely as animate or as inanimate: keko *something* (inanimate); čayek *everything, all* (in.); others are either: wekwentuk *somebody, something*; ne?iš *both*; mčeš *a great many*; ?anut *some, a few*.

Some of the forms mentioned above occur with preceding čak *all* or čo *no*: čak wuye *everybody*; čo wuye *nobody*; čak keko *everything*; čo keko *nothing*; cf. also wik·a *sometime* and čo wik·a *never*, nkoči *somewhere* and čo nkoči *nowhere*.

10. Other Particles. Potawatomi particles occur frequently in clusters of two or more. There are many such clusters, and the details of their structure and meaning are at present relatively obscure. One syntactically and structurally related set, for example, includes those often used as first terms in equational predications (see texts, Ig): tu ni ču *what? who?*; wek ni ču *what?*; ni ču wi *why?*; wek ni *what? for what reason?*; ni mu ču *what? why?*; (tu) ni ppi ču *where?*; tu ni ppi *when?*; ni ču ši *how? in what way?*; we ni (ču) *who?*

The most useful classification of particles and particle clusters is based on their syntactical functions. Some of this has been indicated above (**8**, **9**, and the last paragraph above). The following additional observations can be made:

nu *interrogative*, placed immediately after indicative mode verbs when there is no other interrogative element, or after some other element in a minor-clause question (see texts, IIy).

čo *not*; used as a minor-clause (*No.*), with the negative mode of a verb, or in clusters of particles.

keko *don't*, used alone as a minor clause, or, often, with prohibitive mode of verb, which does not appear without it.

močma *please*, alone, or more often with imperative mode of verb (which also appears alone).

kišp·un *if*, with conjunct mode only.

na ke na or ke na *would that* similarly.

yetek *it is doubtful that* similarly.

ppič· *when* with conjunct and narrative preverb ?e.

A few particles or particle clusters function as predicators (indicators of equation) in equational predications: ye, perhaps s·u, and s·u wi.

Other instances of such classification appear in the texts.

11. Texts and Analysis. A grammatical sketch of a language inevitably falls short of giving a balanced picture, if only because equal treatment has to be accorded common and rare features of the language. In the present case there is the additional defect of practically no syntactical discussion. The chapter of Algonquian grammar (Potawatomi or otherwise) which still remains most completely unwritten is syntax.[6] There have been some syntactical remarks in the previous sections (close-knit phrases, **3**, **6.3**, **7.1**, **10**; person-number-gender concord, **3.21**, **3.11**, by implication in **7**); the writer's separate paper on Potawatomi Syntax is devoted mainly to the morphologically indicated syntax of the language. But the really subtle and important syntactical facts of Algonquian turn on morphologically unmarked classifications which cut across such morphological classes as the four types of verb. A detailed discussion of the latter is impossible without a close examination of a vast amount of textual material. In

[6] In IJAL 11.169-81 (1945), 12.66-78 (1946), 12.198-203 (1946), James A. Geary begins a detailed discussion of the syntax of Fox verb forms. Although his treatment at present is largely semantic, he is building the necessary foundation for the formal syntactical analysis which we must eventually have.

the analysis of the two texts which follow, as much of this type of syntax is hinted at as is possible, but the hints must be taken as tentative. When something needs to be said, for which I cannot yet make statements in structural terms, I have not hesitated to phrase the statements semantically; I am convinced that with sufficient study many of these semantically phrased statements could be recast in formal terms.

The texts are given sentence by sentence, with the sentences lettered and the words, or small groups of words, numbered, for cross-reference. A hyphen is used to join words which constitute close-knit phrases of one kind or another; phonemically and morphophonemically the hyphen and space have the same status. A relatively free translation follows each sentence immediately, and then comes the analytical discussion of that sentence.

11.1. First Text.[7]

(a) (1) ʔi-mu-sᵊu (2) ʔo-nušᵊnape (3) ʔe-ki-pmunat (4) ʔespᵊunun. *Once upon a time an Indian had a pet raccoon.*

1. Particle-cluster, *once upon a time*; found often at the beginning of a story, sometimes in the middle when a more or less separate episode is begun. One also finds nkotuk *once* (see IIa1), or the combination ʔi-musᵊu nkotuk; nkotuk is a derivative of nUkOt *one* (**8.3**), and this use is so like English that one may suspect loan-translation.

2. Demonstrative (**9**) plus noun (**6**), sharing animate gender, third person, singular number (summarized as *3*): *an Indian, a certain Indian.* The demonstrative-plus-noun construction recurs in 11, 19, 29, 31, 55, 67, 69, 73, 75, 81, 88, and in II. In English we contrast a DEFINING ARTICLE (the indefinite article or *a certain* when something is introduced for the first time) and a DEFINITE ARTICLE (when the same thing is referred to later); in Potawatomi this contrast is lacking, ʔo (with its various forms) serving in both circumstances.

3. Narrative preverb ʔe (**7.12**), second-position preverb ki *past time* or *prior time* (**7.13**), and *3-3′* conjunct (**7.4**) of pUmUn *take care of as one cares for a pet or domestic animal, ta*; thus *he (3) had him (3′) for a pet.* The narrative preverb recurs passim, and will not be mentioned explicitly hereafter; nor, in general, will the frequently occurring preverb ki.

4. *3′* (obviative) of ʔesᵊUpUn *raccoon, nai.*

The only verb in this sentence (3) is conjunct, with the narrative preverb ʔe; this sets the style of the text, which is a story, not supposed necessarily to be true—at least, not intended as a recounting of anything which once happened to the narrator. It also informs us that if any independent order verbs occur, the phrases in which they occur will be either explanatory material directed to the listener, not integrally a part of the story, or else direct quotation.

The person-number-gender concord between 2 and the subject-reference of the verb 3, on the one hand, and between the object-reference of 3 and 4, on the other, formally marks 2 as subject of 3, 4 as its object. Here and later, instead of speaking

[7] Dictated by Alice Spear, July 23, 1937, near Crandon, Wisconsin. The second text was dictated by her husband, Jim Spear, April 22 and 23, 1940. These two were my chief and almost exclusive informants. My work was mainly with Jim Spear; but most of the texts which he dictated were of stories which Alice had told him, or reminded him about, in preparation for my work with him; and as we worked he would occasionally check up on a point with her before dictating it. The second text included here falls into that category. Alice Spear was a so-called 'Forest Potawatomi'—that is, had been born and raised in the northern Wisconsin territory. Jim was born and raised in Oklahoma, but had been in Wisconsin for a number of years. Dialect differences were practically non-existent (the difference mentioned in **2.1**, last paragraph, may correlate with geography, the intervocalic /w/ being 'Forest', or may be personal; there are some vocabulary differences). The ages were indeterminate; my best guess is in the upper fifties for both at the time the field work was done.

of concord, we could follow Harris's procedure[8] of extracting morphemic long components. The structure of 2-3-4 would then be stated as follows: segmental morphemes √?o, UnUš·Unape, ?e, ki, pUmUn, ?es·UpUn; morphemic long components ANIMATE, SINGULAR, THIRD PERSON, ACTOR represented in ?o, nuš·nape, and pmunat; long components ANIMATE, OBVIATIVE, GOAL represented in pmunat and ?esp·unun; tagmemes (meaningful, contrastive, features of arrangement) involved in that √?o is before rather than after UnUš·Unape, in that all of this is before rather than after the verb, and in that ?es·UpUn is after rather than before the verb. This treatment (worked out a bit more rigorously than indicated here) has the advantage of itemizing precisely those constituents, morphemic or tagmemic, which are independent or partly independent of each other; we find it simpler in what follows to stick to a more traditional treatment, without implying any fundamental preference for it.

(b) (5) nuš·nape-ču (6) ?o-weni?ket (7) ?esp·un (8) ki-yawu. *When the Indian went trapping the raccoon went along.*

5. *nai, Indian,* in form *3* (= latter half of 2), plus particle ču. The particle is one which occurs only in position directly after the first word of a clause, or occasionally after a later word (never in clause-initial); the meaning of ču is obscure.

6. Demonstrative, in concord with the preceding noun; plus *3* participial (**7.4**) of Oni?Uke *go trapping, ai.* I take 5 and 6 to mean *when the Indian went trapping*; the connection between the noun, the demonstrative, and the participial is not clear, save for their concord. It may be that ?o is related to the participial as it is to a following noun in 2, 11, 19, etc.—that is, literally, *the when-he-went-trapping*; if so, one might rather expect ?i (form *0*) than ?o (form *3*).

7. *nai, raccoon,* here not obviative (cf. 4).

8. *3* indicative of yawU *be at a place, ai.*

5 and 6 constitute a temporal or conditional adverbial phrase (speaking semantically) for the main clause, 7 and 8. 7 is marked formally as subject of 8, by person-number-gender concord (cf. sentence a). One might well expect this sentence to show the obviative in the phrase, and non-obviative in the main clause, or vice versa; that is, either nuš·napen-ču niw-weni?kenut ?esp·un ki-yawu or else nuš·nape-ču ?o-weni?ket ?esp·unun ki-yawnut. But here, as in some other cases, the speaker does not make use fully of the available morphological machinery.[9]

This sentence, with its verb in indicative, is a parenthetical explanation, expanding the meaning of word 3 of sentence a.

(c) (9) ?iw-ču (10) ?e-nu-mkuknot (11) ?o-?esp·un (12) ?e-ki-nišok·muwat (13) ?e-kiws·enut. *When the raccoon grew up he helped him [the Indian] hunt.*

9. Particle-cluster, recurring in 14, 18, 30, 38, 49, 54, 72, 80, 87. Apparently this is sort of a Biblical *and*; note that of the fifteen sentences in this text, nine begin with this. Of the six exceptions, one (a) has the *once-upon-a-time* form, three (b, k, l) are, or begin as, explanatory material with verb in indicative, and one (g) is equational, with no finite verb form. This leaves only one sentence (n), apart from (a), which is narrative in form and does not begin with ?iw-ču. (The ratio is lower in Text II). The second constituent of ?iw-ču is the second-position particle (see 5) found also in sentences b, k, and l, as well as in some clauses which are not in sentence-initial. We may guess that

[8] Zellig S. Harris, Componential Analysis of a Hebrew Paradigm, Lg. 24.87–91 (1948); details in his book Methods in Descriptive Linguistics, soon to appear.

[9] This apparently happens among Algonquian speakers, as, of course, similar things happen with us. Compare Bloomfield's remarks on Menomini, Literate and Illiterate Speech, American Speech 2.432–9 (1927).

the essential habit is one, in story-telling, of often using ču, and that when there is no other easily-available form to put before it—since it cannot come first—?i(w) is used as a 'peg.' Other texts support this theory.

10. Third-position preverb UnU *when, while, as*; *3* conjunct of mUkUkUno *to grow up, ai*: *when he grew up.*

11. Cf. 2 for the construction, 4 for the noun, here in *3* form.

12. *3-3′* conjunct, nišok·UmUw *to help, ta.*

13. *3′* conjunct of kiwUs·e *to hunt, ai.*

Concord marks 11 as subject of 10 and 12, and marks the object of 12 and the subject of 13 as identical. Between 12 and 13 one could have had an animate noun in obviative form (in this case nuš·napen *Indian*), which would be in concord with 12, as its object, and with 13, as its subject. The omission of such a noun, when the context eliminates any need for explicit inclusion of the meaning of the noun stem, is common. The literal translation is, then, *So when he (3) grew up, the raccoon (3), he (3) helped him (3′), he (3′) hunted.* There is no formal indication of any subordination of 13 to 12, apart from the sequence of person; note, however, that the past-time preverb ki occurs in 12, not in 13.

(d) (14)?iw-ču (15)?e-ki-kk·enwač?at, (16)msk·wekas· (17)?e-ki-napk·otnat. *He marked him, he tied a red rag around his neck.*

14. See 9.

15. *3-3′* conjunct, kuk·enUwačU? *to mark, put a mark on, ta.*

16. mUsk·wekas· *red rag, nii*, here singular (*0*).

17. *3-3′* conjunct, napUk·otUn *to tie something around the neck of, ta.*

The subject changes from *raccoon* to *Indian*, without explicit indication; the *3* in verbs 15 and 17 is obviously the Indian, the *3′* the raccoon. In the second clause (16–17), the relation of the inanimate noun 16 to the verb is indicated only by the lexical meaning of the verb: *a red rag, he tied something around the neck of him.* Such a collocation is not at all uncommon, particularly with double-object verbs (**4.7**), but also with others, as in the present instance.

(e) (18)?iw-ču (19)?o-?esp·un (20)?e-ktukosit (21)nuk·o (22)mt·ukwen, (23) wič-?esp·unun (24)?e-mk·uwat, (25)?e-nis·wepnumwat (26)niw-nuš·napen, (27)nuk·o (28)?e-ns·at (29)?o-nuš·nape. *The coon would climb a tree, would find his fellow raccoons, and would throw them down to the Indian; and the Indian would kill them.*

18. See 9. 19. See 11.

20. *3* conjunct, kUtUkosi *to climb up, ai.*

21. Particle, *customarily*; the force of this is brought out in the translation by using *would.*

22. mUt·UkwE *tree, nai*; here obviative.

23. Form with *3* possessor of ič ∼ ?es·UpUn *fellow-raccoon, nad*; this consists of the medial √ič (**6.3**) plus the noun of 4; the form as a whole is *3′.*

24. *3-3′* conjunct, mUk·Uw *to find, ta.*

25. *3-3′* conjunct, nis·UwepUnUmUw *to throw something down to, ta.*

26. = 2, but obviative.

27. See 21.

28. *3-3′* conjunct, nUS· *to kill, ta.*

29. See 2.

This sentence is perhaps typical in its use of person-concord to keep several nominal referents apart. The first referent, *raccoon* (19), is subject of verbs 20, 24, and 25; verb 28 is in the proper form for *raccoon* to be its subject, but a new subject is explicitly given for it in 29. The first verb, 20, has no morphologically marked object, but *tree(s)* (22), is semantically one, and is obviative in the presence of the non-obviative animate *raccoon*, which was mentioned first. The second verb, 24, has its own obviative object 23, *his fellow-raccoon(s)*; this plays a morphologically unmarked role relative to the double-object verb 25 in the next clause, which has 26 *the Indian(3′)* as formally marked object. The last clause (27-28-29) starts

over again; the third-person animates involved in the context are too complex to allow clarity without the shift. That is, if the narrator had concluded nuk·o ?e-ns·anut, the subject of ?e-ns·anut (*3′*) might be taken as **26**, or as **23**.

Note that the particle nuk·o is repeated for the clause in which there is a change of third-person subject; note also that with this particle in the environment, no ki *past time* is present in the verb complexes.

The difference between msk·wekas· ?e-ki-napk·otnat in sentence d and ?e-ktukosit mt·ukwen in sentence e is worth noting: in the former, the verb has a formal object different from the appended noun; in the latter, the verb has no formal (morphologically indicated) object at all. It is clear that the four-way morphological classification of verbs as *ta*, *ti*, *ai*, and *ii* is at least partially intersected by a syntactical classification into those, like the ones just cited, which permit (or require) a morphologically unmarked pseudo-object, and those, such as nUS· *to kill*, *ta*, or mUkUkUno *to grow up*, *ai*, which do not.[10]

(f) (30) ?iw-ču (31) ?o-nuš·nape (32) nwuč (33) ?e-miškwusut (34) ?e-mk·utaknuket. *So the Indian was able to collect furs better.*

30. See 9. 31. See 2.

32. Particle, *more, better.*

33. *3* conjunct of miškUwUs *be able, ai.*

34. *3* conjunct of mUk·UtakUnUke *collect furs, ai*, denominative from mUk·UtakUn *fur, nii*; cf. √k·e, **4.3**, 4.

31 is subject of verbs 33 and 34. Verbs 33 and 34 are the same kind morphologically; the first may belong to a syntactical subtype of *ai* verb which are regularly followed by another verb, as 33 is here.

(g) (35) ?i-šu-na (36) pune (37) ka-šučkewat. *That is how they always did it.*

35. The *0* form of the demonstrative (**9**) followed by the particle complex šu-na which, like ču, is always non-initial in the clause. The meaning of šu-na is obscure, but may be a matter of slight emphasis or disjunction; perhaps one should translate 35 approximately as *This, then, ...*

36. Particle, *always, regularly, every time, all the time.*

37. *35* participial of UšUčUke *do thus, ai*; √*ablaut*/ (**7.11**) is simultaneous with preverb ki *past time.*

The equational sentence type equates a substantival form, often (as here) a demonstrative, as first term, and a participial as last term: *This, then, [was] how they always did.* Sometimes an equation-marking particle occurs between the equated terms; in this case not. Here the first term is ?i; the second term is 36–37, a participial with preceding particle modifier.

(h) (38)?iw-ču (39)nkotuk (40)?esp·un (41)?e-ki-mk·uwat (42)ns·wu-?esp·unun, (43)nkot (44) ?e-ki-nis·wepnat, (45)minu (46)nkot, (47)?ahaw-ču (48)ni-ns·wu (48bis)?e-ki-kč·u-mikatwat. *Once the coon found three other coons; he threw one down, and another, but golly! he and the third one fought hard.*

38. See 9.

39. Particle *once*; based on nUkOt *one*; see 1.

40. See 7. 41. See 24.

42. Numeral *three* plus noun *raccoon* in obviative. This construction resembles demonstrative plus noun (2 etc.) syntactically; with a numeral, however, there is the mor-

[10] Bloomfield, in his Algonquian Sketch (see Pot. I, fn. 7) shows how in the history of some of the languages, particularly Ojibwa (which on this point is very close to Potawatomi), paradigms which were intransitive in PA have become transitive, or vice versa. The interchange is mainly between *ai* and *ti*. Such change might reflect the pressure of such syntactical classifications as that mentioned in the text on the morphology, and vice versa. For the Potawatomi picture, it is useful to compare also B. Bloch's classification of (morphologically undifferentiated) Japanese verbs into transitive and intransitive, on a syntactical basis; see his Studies in Colloquial Japanese III, **2.4**, JAOS 66.304–15 (1946).

phological difference that the numeral does not show gender, person, or number (**8**).

43. Numeral, *one*.

44. *3-3′* conjunct, nis·UwepUN *to throw down, ta*; cf. 25.

45. Particle *and, again*.

46. See 43.

47. Interjection (**1**) *by golly!*; with ču (5) appended.

48. Demonstrative (*3′*) plus numeral: *the third*. The construction again resembles that of 2 and 42, but only the demonstrative can show the gender, person, and number.

48bis. *35* conjunct, √mikat *fight with each other, ai* (**4.4**); particle kUč·U *much, greatly* inserted between preverbs and verb stem.

40 is subject of verbs 41, 44, and part of the subject of 48bis; this last verb, in form for *35* subject, implies that *raccoon* (40) and in addition ni-ns·wu *the third* (48), constitute its subject. 42 is object of 41; 43, a numeral, is clearly the object of 44, and is marked morphologically as such so far as the verb is concerned, though the numeral itself cannot participate in the concord. Words 45–46 constitute an elliptical clause; the context implies that the structure of the preceding clause, with verb 44, is involved here too. The pattern by which a *3* noun and a *3′* noun serve jointly as subject for a *35* verb has not been observed in many cases.

(i) (49)ʔiw-ču (50)škuč (51)neʔiš (52) ʔe-ki-nis·awat, (53)ʔe-kč·u-mikatwat. *After while both fell down* [*out of the tree*], *and fought hard with each other.*

49. See 9.

50. Particle, *after while, presently*.

51. Particle which is syntactically like a numeral: *both, the two of them*.

52. Conjunct *35* of nis·ª/ₒ *fall down, ai*; cf. 44, 25.

53. See 48bis.

The sequence of two verbs, the first with ki and the second without, as with 12 and 13 (sentence c), seems to be one device for indicating temporal sequence.

(j) (54)ʔiw-ču (55)ʔo-nuš·nape (56)ʔe-ki-pwa-kk·enmat (57)ni-wtuʔesp·unmun, (58) msk·wekas· (59)ʔiw (60)ʔe-ki-pk·uškannuk. *The Indian couldn't identify his own coon, since the red rag had been torn off.*

54. See 9. 55. See 2.

56. Preverb pwa *negative* (**7.16**); *3-3′* conjunct of kUk·enUm *know, recognize, be acquainted with, ta*.

57. Cf. 2 for construction. Here both demonstrative and noun are obviative. The noun has *3* possessor, with the possessive derivative suffix (**6.6**); cf. 23, where √m is omitted when √ič precedes.

58. See 16.

59. Demonstrative, form *0* in concord with 58.

60. *0′* conjunct of pUk·Uškª/ₒ *come off, be torn off, ii*.

The two clauses, 54–57 and 58–60, are not correlative, since the verb of the second is obviative (*0′*), marking its subordination. 59 refers back to 58; this construction, with demonstrative after noun instead of before, contrasts with the construction of 2: ʔiw msk·wekas· *the red rag, that red rag*, but msk·wekas· ʔiw *the red rag, it . . .*, or *as for the red rag, it . . .*. 59, or 58–59, is the subject of 60; the obviation in the clause can only show in the verb since inanimate nouns have no special obviative form.

(k) (61) ki-ču (62)ʔyaykenwik-ču (63)kiw, (64)čo-ču-mamta (65)ʔe-wi-wep·otwat, (66) ʔe-pwa-kk·enmat (67)ni-wtuʔesp·unmun. *They were just the same size, these two, you see; so it was impossible for him* [*the man*] *to hit him* [*the other coon*]*; he couldn't tell which one was his own.*

61. Demonstrative, *35* form, with ču (9).

62. *35* indicative of ʔyayUkenO *be the same size as each other, ai* (initial /ʔ/ not certain); with ču again.

63. See 61.

64. Particle cluster čo-mamta *not possible*; with ču in its usual position.

65. Preverb wi *future or potential* (**7.13**); *3-3'* conjunct of wep·otUw *to hit, ta.*

66. See 56. 67. See 57.

The first part, 61–63, is explanatory; then the speaker reverts to narrative style. 61–63 has 61 as subject of 62; or perhaps 63 is subject. We may perhaps approximate the Potawatomi by translating *These [two], you see, were just the same size, [were] these [two]*—where *you see* brings out the force of the indicative in the narrative context. In the rest of the sentence, the first clause has a conjunct verb with preverb wi correlated with the particle cluster čo-mamta, which is the customary collocation: čo-mamta implies that the action has not taken place (and will not), and wi fits into this: *it was not possible that he should* (wi) *hit him.*

(l) (68) pune-ču (69)ni-wtu?esp·unmun (70) nam-yukwan (71)ki-wčuš·non. *His own coon was always underneath.*

68. See 36. 69. See 57.

70. Locative, *underneath, below* (**3.22**, **3.3**).

71. *3'* indicative, OčUš·Un *be underneath, ai.*

Again we have a parenthetical explanation. 69 is the formally marked subject of 71.

(m) (72)?iw-ču (73)?o-?esp·un (74)?e-ki-kk·enmat (75)niw-wik·anun (76)?e-pwa-kk·enmukot. *The raccoon saw that his friend couldn't recognize him.*

72. See 9. 73. See 11. 74. Cf. 56.

75. The construction of 2, here obviative; form for *3* possessor of √ik·an *friend, nad.*

76. Cf. 56; here *3'-3* conjunct.

73 is subject of 74, object of 76; 75 is object of 74, subject of 76. The meaning requires, however, that we take 75–76 as a clause-object of 74; this may mark the verb of 74 as syntactically special.

(n) (77)kkan (78)?e-napmat (79)(w)škiš-konuk. *He caught his [the Indian's] eye.*

77. Particle, *closely, carefully.*

78. *3-3'* conjunct, napUm *look so to, look so at, have look so to one, ta.*

79. Locative of *05* form with *3* possessor of škišUkO *eye, nid* (or *nii?*): *in his eyes.*

The form of 79 does not tell us whether the eyes belong to the raccoon or to his master. The meaning and the formal syntax (except for the point queried) are clear; but that this particular collocation should have the meaning it does implies that it is in some sense an idiomatic expression.

(o) (80)?i-ču (81)ni-wtu?esp·unmun (82) ?ipu (83)?e-nu-k·wes·at (84)niw-nkot, (85) minu (86)?e-čipnikwes·at, (87)?iw-ču (88)?o-nuš·nape (89)?e-ki-wep·otwat (90)niw-nkot, (91)?e-ki-ns·at. *His coon tossed his head at the other, and winked; so the Indian hit the other one, and killed him.*

80. See 9. 81. See 57.

82. Particle, *there.*

83. *3* conjunct of k·wes·ª/ₑ *nod one's head, ai*; with preverb UnU (10).

84. Demonstrative plus numeral: *the other one* (the one with which he was fighting); cf. 42.

85. See 45.

86. *3* conjunct of čipUnikwes·ª/ₑ *to wink, ai.*

87. See 9. Actually, save for intonation, this begins another sentence.

88. See 2. 89. See 65.

90. See 84. 91. See 28.

The narrator slips on person concord in the first part of this sentence: quite clearly 81 is subject of 83 and 86, even though the former is obviative and the verbs are not; one would expect ?e-nu-k·wes·anut and ?e-čipnikwes·anut (cf. sentence b). Both of these verbs are morphologically intransitive; the first has 84 as morphologically unmarked pseudo-object (cf. sentence e). The preverb UnU in 83 may imply *when* for everything through 86, rather than just for 83, calling for a translation: *So when his*

coon there nodded his head at the other and winked, then the Indian hit the other and killed him.

The above story is told as humorous; I read it to various Ojibwas in southern Ontario and it was so accepted. The humor presumably lies in the incongruity of the things a raccoon is said to be doing. Since a quasi-human quasi-animal mythological creature might do such incongruous things without implying any humor, we may pretty safely deduce that there is no mythological element in the present story; indeed, the general type of humor looks suspiciously European-American.

11.2. Second Text. In the analysis of this text we ignore anything already expounded in connection with Text I.

(a) (1)nkotuk (2)wapkonoškwe (3)ʔe-kč·u-mwut (4)čik-sipu. *Once a rat was crying bitterly beside a river.*

1. See I1, I39.

2. *nai*, here *3*, *rat* (**6.3**).

3. *3* conjunct, mUw *to weep, ai*; inserted kUč·U *intensive* (I48).

4. Locative; particle čik *alongside of*; *nii, river*, here *0*.

(b) (5)ʔi-ču (6)ʔe-pmupkumput·ot (7)s·uks·i (8)ʔe-notwat (9)ʔe-mwunut. *A deer came running along and heard him crying.*

6. *3* conjunct, pUmUpUkUmUpUt·o *to come running along, ai*. Hereafter the mode of verbs will be mentioned only if they are not conjunct.

7. *nai, 3, deer.*

8. *3-3′*, notUw *hear, ta.*

9. *3′*; see 3.

The connection of 8 and 9 is like that between I12 and I13.

(c) (10)ʔi-sipu (11)ʔe-kč·u-mošk?uk. *The river was very high.*

10. Demonstrative plus noun, *0* (I2 for construction; 4 for noun).

11. *0*, moškU?Ut *be high, be filled up, ii*; kUč·U as in 3.

(d) (12)ʔi-ču (13)ʔe-nattuwat (14)s·uks·i, (15) 'tu-ni-ču (16)ʔešwepsin?' *The deer asked him, 'What's your trouble?'*

13. *3-3′*, natUtUw *to ask, ta.*

14. See 7.

15. Particle cluster; tu-ni is an interrogative element used, as here, as first term in an equational construction: *what?*

16. *2* participial, UšUwepUs *experience something, ai*. The paradigmatic ending UyUn appears here as /in/, for reasons unknown.

Like other verbs of saying, natUtUw is followed by quoted material; verbs which so occur constitute a syntactic class.

(e) (17)ʔi-ču (18)ʔe-nat (19)wapkonoškwe, (20)'ʔe-wi-tk·umiyan (21)ntušteʔa.' *The rat said, 'I want to get across [the river].'*

18. *3-3′*, U, Un *say to, ta* (**7.41,** end).

20. *1* conjunct, with preverb wi, of tUk·Umi *to go across water, ti*(?).

21. *1* indicative, UšUteʔ^{a}/$_{e}$ *think, plan, want, ai.*

20–21 is conversational style, with main verb in indicative. The conjunct verb with narrative preverb ʔe is apparently used with the verb *to think, plan, want*, and perhaps with others, much as English uses the marked infinitive (after *plan, want*), or *of . . . -ing* (after *think*).

(f) (22)s·uks·i (23)ʔe-nat, (24)'kta-nišok·-muwun. (25)šotu (26)kta-k·wutasi.' *The deer said 'I'm going to help you. Climb up here.'*

24. *1–2* indicative, nišok·UmUw *to help, ta* (I12); intentive preverb ʔa (**7.12**).

25. Locative from demonstrative stem, with /tu/ added (**9**): *here.*

26. *2* indicative, Uk·wUtasi *climb up, ai*; intentive preverb ʔa.

Note that 26, a suggestion, is in indicative, not imperative.

(g) (27)ʔi-ču-šu (28)keyapu (29)ʔe-kč·u-mwut. *But he [the rat] just kept on crying.*

27. The šu apparently carries the force of *but.*

28. Particle, *continually, keeping on.*

29. See 3.

(h) (30)s·uks·i (31)ʔe-nat, (32)'tu-ni-ču šu-na (33)ʔa-nap·nunnan? (34)šotu (35) kta-pitote (36)nčašik.' *The deer said 'What then am I to do for you? Get in here, in my nose.'*

32. tu-ni-ču as in 15; šu-na *then, indeed* (non-initial particle-cluster).

33. *1–2* participial of a *ta* stem (nap·UnUn?) *do something for*; the intentive preverb ʔa with a participial is unexpected.

35. Like 26, with √pitote *get in, ai.*

36. Locative of form with *1* possessor of čašE *nose, nid.*

(i) (37)keyapu-kš·u (38)ʔe-kč·u-mwut. *He still(?) just kept on weeping bitterly.*

37. The kš·u is not familiar.

(j) (39)s·uks·i (40)ʔe-nat (41)minu, (42) 'kta-konep·wun.' *The deer said, again, 'I'll hold you in my mouth.'*

41. See I45; the position is different here.

42. ʔa as in 24, 26, 35; *1–2* indicative of konep·Uw (form?) *hold in one's mouth, ta.*

(k) (43)'čo-šu-na-mamta, (44)kta-šaš·akum.' *'But that's impossible; you'd chew me up.'*

43. čo-mamta as in I64; šu-na as in 32.

44. ʔa; *2–1* indicative of šaš·akUm *chew, ta* (I have this stem recorded as šaš·akwUm; the form here may have been recorded incorrectly).

(l) (45)ʔi-ču (46)s·uks·i (47)ʔe-nat, (48) 'kta-pitote (49)nt·uwkak.' *So the deer said, 'Get into my ear.'*

48. See 35.

49. Locative, *1* possessor with t·UwUkE *ear, nad.*

(m) (50)ʔiw-ču (51)ʔe-ki-wnwačit (52)ʔe-ki-pitotet (53)ši-wt·uwkannuk. *So he made up his mind and got into the other's ear.*

51. *3*, Onwači *to decide, ai.*

52. *3*, with stem of 35, 48.

53. Demonstrative plus noun, both locative; noun is in form for *3* possessor (here *3′*, but not morphologically distinguished), and is itself *3″*. (My notes record t·UwUkE as inanimate, but its occurrence in a *3′* or *3″* implies that it is animate.)

Unless 51, Onwači, falls into a special syntactical class of verbs, we must take 51 and 52 as coordinate, as indicated in the translation. Note that both verbs have preverb ki; there is no sequence of tense as in I12, 13 or I52, 53.

(n) (54)kakiš-pitotet (55)wu-s·i-pu (56) ʔe-ki-šyat (57)nam-yukwan (58)ʔapč·u. *After he got in, he went on down farther.*

54. *3* participial of the stem of 35, 48, 52; the preverbs are √*ablaut*/ and kikiš (**7.14**) *after.*

55. Particle cluster, *further, more.*

56. *3*, šy$^{a}/_{e}$ *go, ai.*

57. See I70.

58. Particle, meaning not clear (*more? halfway?*).

The participial 54, as often, functions (semantically) as an adverbial modifier of the main clause.

(o) (59)ʔe-mošʔat (60)ʔe-kp·inut, (61)ʔe-ki-skupwat (62)wteʔinnuk, (63)ʔiw-ču (64) ʔe-ki-ns·at, (65)ʔe-ki-mošʔat (66)ʔe-ppuk-š·unnut. [*When*] *he felt the other coming to shore, he bit him in the heart, and killed him, and felt him fall down.*[11]

59. *3-3′*, mošUʔ *to feel, sense, ta.*

60. *3′*, kUp·i (form?) *come ashore, ai.*

61. *3-3′* conjunct, sUkUpw *to bite, ta.*

62. Locative of *3″* form with *3* (here = *3′*) possessor of teʔE *heart, nad.*

[11] It is implied, not explicitly stated, that the deer has swum across the river, carrying the rat in his body.

64. See I28. 65. See 59.

66. *3′* of pUpUkUš·Un *to fall down, ai.*

(p) (67)ʔiw-ču (68)ʔe-ki-ktotet, (69)ʔe-ki-mwut (70)minu, (71)ʔe-pwa-kškukiškšwat (72)ni-s·uks·in. *So he crawled out, and cried again, [because] he couldn't cut the deer up.*

68. *3*, kUtote *crawl out, ai.*

70. Like 41.

71. Negative preverb pwa; *3-3′* of kUškU-kiškUšw *be able to cut up, ta*; this stem has two initials: kUškU *be able*; the rest occurs as an independent verb stem kiškUšw *cut up, ta.*

72. Demonstrative plus noun, both *3′*.

(q) (73)ʔi-ču (74)nuni-mʔwe (75)ʔe-pmu-pyat (76)ʔe-notwat (77)ʔe-mwunut (78) wuye. *Then a wolf came along and heard someone crying.*

74. nuni-mʔwe (or nunimʔwe) *nai*, here *3*, is some special kind of wolf; the analysis is not clear. If nuni is related to nunu *man*, then the form is literally *werewolf* (with, of course, quite different cultural overtones from ours); it may be the proper name of some quasi-human mythological character.

75. *3*, pUmUpy$^{a}/_{o}$ *come along, ai.*

76. See 8.

78. A pronoun, *someone.* One might have had the obviative form wuyeyun here; but wuye often occurs in place of either wuyeyun (*3′*) or wuyeyuk (*35*) (**9**).

(r) (79)mt·uno (80)ʔe-wapmat (81)s·uk-s·in (82)ʔe-pmaks·onut. *He only saw a deer lying down.*

79. Particle, *only.*

80. *3-3′*, wapUm *see, ta.*

82. *3′*, pUmakUs·o *lie down, ai.*

(s) (83)peš·oč (84)ʔe-šyat, (85)ʔe-wapmat (86)wapkonoškweyun (87)ʔe-ču-mwunut. *He went closer, and saw a rat there crying.*

83. Particle, *closer.*

84. See 56. 85. See 80.

87. See 9; the force of ču is not clear here (**7.14**, par. 2).

(t) (88)ʔi-ču (89)nuni-mʔwe (90)ʔe-nattu-wat, (91) 'tu-ni-ču (92)ʔešwepsin?' (93)ʔe-nat. *The wolf said to him, 'What's your trouble?'*

90. See 13. 91–92. See 15–16.

93. See 18.

In this sentence the quoted material is bracketed between verbs of saying (90 and 93). This is a common device, serving to mark clearly the exact limits of the quotation.

(u) (94)wapkonoškwe (95)ʔe-nat, (96) 'čo-keko (97)wa-yoyan (98)ʔe-wi-kiškso k (99)ʔotu-s·uks·i.' *The rat said, 'There's nothing for me to use to cut up this deer.'*

96. čo, *negative*, before keko *something*; this latter is morphologically a particle, but syntactically like a noun, as is the combination.

97. *1–0* participial of √yo *to use, ti*, with preverb wi: *that which I would use.*

98. *1–3*; compare stem with that of 71. The discrepancy, /š/ in 71, /s/ here, may be wrong hearing or recording, or it may be that different finals are involved.

99. The demonstrative has tu appended (**9**).

The syntax of the quotation is not clear.

(v) (100)ʔi-ču (101)ʔe-nat (102)nuni-mʔwe, (103)'ʔwunut (104)ntokmam. (105) kinya.' *The wolf said, 'My knife is good. It's sharp.'*

103. *0* indicative, ʔUwUnUt *be good, ii.*

104. *1* possessor with *0* form of ʔokUma (form?) *knife, nii.*

105. *0* indicative, *be sharp, ii.*

(w) (106)ʔi-ču (107)ʔe-nat (108)nuni-mʔwe, (109)'mt·ukos·un (110)natun (111)ʔe-wi-t·oyko (112)šiw (113)ʔi-wyuas·.' *The wolf said, 'Get some sticks for us to put the meat on.'*

109. *05* of mUt·Ukos· *stick, twig, nii*; diminutive (**6.5**) of mUt·UkwE *tree, nai* (or possibly *log, nii*).

110. *2-0(5)* imperative of √nat *fetch, get, ti.*

111. *12-0*, Ut·o *put, affix, ti.*

112. Locative of demonstrative: *here*, or *on them* (the sticks).

113. Demonstrative plus noun, both *0*; UwUyas·E *meat, nii.*

Once again (as in 98 and elsewhere) we have a conjunct form with wi, in conversational context, expressing a purpose or intention or possibility (at least, something not yet actualized). 109 is the object of 110; 113 is the object of 111; 112 refers back to 109.

(x) (114)wapkonoškwe (115)ʔe-mačit (116)ʔe-natut. *The rat went off and fetched* [= *to fetch*] *them.*

115. *3*, √mači *go away, leave, start out, ai.*

116. *3-0(5)*, stem of 110.

(y) (117)'šotu-nu?' (118)ʔe-nat. *'Here?' he said to him.*

117. nu is the interrogative particle; often used after an indicative verb form, but here after a demonstrative (locative).

(z) (119)'wu-s·i-pu (120)nwuč' (121)ʔe-nat (122)nuni-mʔwe. *'A little further,' said the wolf.*

119. See 55.

120. Particle *more, better.*

(aa) (123)nwuč (124)wu-s·i-pu (125)ʔe-šyat (126)wapkonoškwe. *The rat went a little further.*

125. See 56.

(ab) (127)'šotu-nu?' (128)ʔe-nat. *'Here?' he said to him.* = sentence y.

(ac) (129)'wu-s·i-pu (130)nwuč' (131)ʔe-nat (132)mʔwe. *'A little further,' said the wolf.*

Cf. sentence z. Here the wolf-character is called by the generic term mʔwe *wolf.*

(ad) (133)kawa (134)ʔe-tept·uwat (135) wapkonoškwe. *The rat could scarcely hear him.*

133. Particle, *scarcely.*

134. *3-3'*, tepUt·Uw *hear, ta*, or more probably *be able to hear, ta* (cf. preverb tep, as in ntep-ns·a *I get to kill him*).

Note that Potawatomi is like standard English in that kawa *scarcely, barely* goes with an affirmative verb form, not with a negative form.

(ae) (136)ʔe-pmupyat (137)neyap. *He came on back.*

136. See 75.

137. Particle, *back, returning.*

(af) (138)ʔe-pyat, (139)čo-keko (140)wu-yas·, (141)ʔe-ki-čakmat (142) ʔo-nuni-mʔwe. *He came back, no meat; the wolf had eaten it up.*

139. See 96.

140. See 113. The relation of 139 to 140 seems to be like that of 96 to 97, even though 140 is a noun, 97 a participial.

141. *3-0(5)*, čakUm *eat up, consume, ti* and *ta.*

The occurrence of ki in 141 is significant; ki is rare in this text, and here, contrasted with its absence in 136 and 138, justifies the English translation with *had.*

(ag) (143)ʔi-ču-nu (144)wapkonoškwe (145)ʔe-mačit (146)minu (147)ʔe-mwu-mwut. *So the rat went off again and cried and cried.*

146. Like 41 and 70.

147. Like 3, but with R instead of kUč·U (**7.17**).

(ah) (148)ʔi-ču šu-na (149)ʔe-ts·uk (150) ntats·ok·an. *And so my story ends.*

149. *0*, tUs·o *end, ii.*

150. *1* possessor with yatUs·ok·an *story, nii.*

Many of the texts end with some expression like this one—both 'stories' and biographical episodes. Of course the device may be a product of the circumstances of dictation, rather than a traditional story-telling one.

SOCIOLOGIC NOTES ON OBSOLESCENT LANGUAGES

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0. Introduction
1. Tasmanian
2. Yahi
3. Cornish
4. Mohican
5. Chitimacha
6. Natchez
7. Catawba
8. Penobscot
9. Mashpi
10. Conclusion

0. The disappearance of languages, when viewed in the broad sweep of history, is no uncommon phenomenon. Sumerian, Egyptian and Etruscan are familar examples of important tongues in the ancient world that later passed out of currency. The expanding Roman Empire swept out of existence scores of languages in Italy, Gaul and Iberia. Pictish was lost without a trace after Germanic tribes overran England. In recent centuries, the conquest and colonization of new lands by European powers eventually resulted in the loss of hundreds of languages. The process is still continuing, particularly in the Americas. As a result, it is possible to observe communities whose original speech is even now in the process of disappearance, and to gain thereby an insight into the similar events that have occurred in the past. Since no serious study has yet been made of this phenomenon, the present paper attempts, by means of brief statements on a series of known cases, to indicate some of its features. There are seven examples from North America, one from England and one from the South Seas. They include cases which the author has had occasion to observe personally, with the addition of a few others from available literature. Since none of the observations were originally made with the specific object of discovering the factors at work in dying languages, the present summaries cannot give rounded systematic answers to even the main questions. Nevertheless, they seem to contain enough pertinent material to justify their presentation.[1]

It will be noted that many of the circumstances described are similar to those found in the languages of some immigrant groups, particularly when the community is entirely cut off from the mother country and culture. Furthermore, whatever one may say regarding language will find its analogs in other aspects of culture. If these parallels are not discussed here, it is not for failure to recognize them, but only because of the modest aims of the present offering.

1. Tasmanian. Tasmania was discovered in 1642 by Abel Jans Tasman and in the next 160 years was visited by several other explorers, including Captain Cook and Captain Bligh. Almost without exception, the contacts of these expeditions with the natives were friendly. In 1803 British settlement began. With the landowners came convicts, indentured to serve them, and soldiers. Very soon the settlers and the natives were in conflict. This began when some soldiers fired on a group of natives engaged in a kangaroo drive; it is said the soldiers thought they were being attacked. Reprisals and counter-reprisals followed, and it is reported that some also hunted the

[1] This material was first included in a public lecture, on Dying Tongues, given at the University of Wisconsin in 1938. However, the work of adapting it for publication was interrupted and I have not had the opportunity to complete it until recently.

natives down for sport. But the situation became uncomfortable for the settlers and repeated efforts were made, without success, to bring an end to the conflict. In 1828, Governor Arthur, in desperation, decided to round up the natives and put them off by themselves in some safe place. A reward of 5£ for every adult and 2£ for every child captured without injury was offered. These bounties resulted in few captures but many deaths, since the natives, with no inkling of the humanitarian purpose of their aggressors, fought back. Then the governor tried a large-scale expedition, which was known as the Black Line. A force of 3000 settlers, convict servants, police and soldiers were deployed in a long line from the east coast to Great Lake in the center of the island; this line was to proceed southward driving all natives before it until they were safely confined on Tasman's Peninsula. The expedition was elaborately planned and great feats of difficult organizing and locomotion were performed in rough, mountainous, and thickly wooded country. It took several weeks time and an outlay of 30,000£. But throughout the maneuver only five natives were encountered, two being captured and three killed; all the others had eluded the dragnet.

About this time, George Augustus Robinson conceived the idea of learning the language of the natives and going among them as a friend. In five years he succeeded in gathering all the natives together and taking them to live on Flinders Island. In 1800 there were supposed to have been five thousand or more Tasmanians. When Robinson finally finished his task in 1835 there were only 203 left. The rest had been killed by the settlers or had died of new diseases or of grief. Protected and confined on Flinders Island, the survivors pined away and in 12 years their number was reduced to 44. These were moved again to Oyster Bay where they continued to die off from disease and drink until the last of them, a woman named Truganini, died in 1876, just 73 years after the first European settlement.[2]

We are told little about the linguistic phenomena connected with the story of the Tasmanians. Specimens of their language, mainly vocabularies, were recorded by several Europeans. There were four dialects, which varied considerably. When natives from different parts of Tasmania were brought together on Flinders Island, it was probably not easy for them to converse with one another. Calder speaks of their language as being 'all but lost.'[3] Some English or Pidgin words came into use in the native speech, as *tea*, *picanini*, *buckalow* or *bacala* ('bullocks') and *tabletee* or *tablee* ('travel'). The Australian word *lubra* was introduced by the whites. It is reported that some sort of Pidgin was in use.[4]

As might be expected from the nature of the contact and the brevity of its duration, English has taken nothing, not even place names, from the Tasmanian language.

2. Yahi. The story of the Yahi is briefer than that of the Tasmanians, but there are elements in common. It begins with 'Indian troubles' in northern California in 1857, and ends with the death of an old man in the University Hospital in San Francisco, only 59 years afterward. In the early days the Yahis, known to the settlers as the Mill Creek Indians, distinguished themselves by their ability to raid suddenly and to disappear in the hills. Expeditions organized against them usually failed to find them or were ambushed and driven off. The men would then find and kill some

[2] This account based on Fenton, A History of Tasmania, London 1884. Fenton (p. 375) quotes Robinson with regard to socio-psychological factors in depopulation: 'They suffered much from mental irritation, when taken with disease they refused sustenance and died in delirium. The wife or husband, when bereaved, would immediately sicken, and rapidly pine away.'

[3] Fenton, op. cit. 91, footnote.

[4] Fenton, op. cit. 96, 103–4, 437.

other Indians and return home satisfied. We are not told how the raiding career of the Yahi started, but it is evident that the raids were partly in retaliation for injuries, partly a means of obtaining food when game became scarce. The Yahi did not always get away. On several occasions bands of them were cornered and shot down to the last man, woman and child. After 1871, little was seen or heard of them, but reports came in from time to time of people who had seen Indians or evidence of their presence. There was a tendency to discredit such reports until a surveying party in 1908 ran onto a cleverly hidden camping place in Deer Creek Canyon and saw three old Indians, who got away. In 1911, the barking of dogs in the early morning at a slaughterhouse near Oroville led to the discovery of a naked starved Indian, the last Yahi, who had been driven by hunger to seek food in this place. The discovery of the 'wild man' created considerable excitement, especially frightening the old man himself. Efforts to communicate with him in English, Spanish, and several Indian languages were of no avail until T. T. Waterman of the University of California came armed with a vocabulary in the related Nozi language and, after a number of attempts, finally said an intelligible word, siwin?i *yellow pine*, the material of which the cot in the jail-cell was made. From this beginning, Waterman initiated the study of the Yahi language, later taken over by Edward Sapir. The old Indian was called Ishi, the word for *man* in his language. He was taken to the University and soon adapted himself to a new role as contributor to the study of the language and culture of his tribe. Probably in his fifties when he was taken in, he learned to make himself understood in English, speaking with a marked accent and with modified grammatical forms. Specimens of his English are given by Saxton T. Pope. His command of his own language was faultless.

Some interesting details on the language situation with Ishi are contained in the following note by Sapir:[5]

> Ishi, the informant, spoke very little English, but I consider the full data on kinship terms that I obtained from him, aside from a few doubtful points, as thoroughly reliable. This is due to the fact that the terms were collected very slowly and with the utmost care and circumspection, with repeated checking whenever opportunity was offered; further to the fact that data already obtained from the Northern Yana helped me to follow the informant. The many agreements in the nomenclature between the Yahi and Northern Yana systems are in no case due to suggestion on my part. The work was rendered possible by the use of counters, differing in appearance for males and females, arranged in the form of a genealogical tree; this device put the whole investigation on a directly visible footing. My familiarity with Northern and Central Yana (by that time also of Yahi) naturally also helped, tho the language of the discussion itself was a crude jargon composed of English, quasi-English and Yahi.

The Yahi seem to have been isolated from other Indians as well as from the White settlers, but somehow a few words of Spanish jargon became known to some of them. Thus, it is related that when Mr. Norvall in 1885 came upon four Indians taking old clothes from his cabin, a young woman among them pointed toward Mill Creek and said, 'Dos chiquitos papooses' (two small children) by way of asking mercy. An old woman, found by the surveying party already referred to, we are told, 'asked in a few words of broken Spanish for water.'[6]

Incidentially, the related Central and Northern Yana (Nozi, mentioned above) are also now extinct, and were already reduced to a last few speakers each by the

[5] Edward Sapir, Yana Terms of Relationship, UCPAAE 13.153–73 (1918).

[6] Material for this account found in T. T. Waterman, The Yana Indians, UCPAAE 13.35ff. (1918); Saxton T. Pope, Yahi Archery, UCPAAE 13.103ff; Pope, The Medical History of Ishi, UCPAAE 13.174ff; Edward Sapir, Text Analyses of Three Yana Dialects, UCPAAE 20.263ff (1923). The bulk of Sapir's linguistic material on Yahi has not yet been published.

time of Ishi's death. That the circumstances of the extinction of these dialects were different from the case of Yahi is indicated by the fact that the last speakers lived in contact with younger Yanas who did not speak their native language.

3. Cornish. Cornish went out of use something over a century ago, but John Norden in the early half of the seventeenth century already noted that it was beginning to go:

> But of late the Cornish men have much conformed themselves to the use of the English tongue, and their English is equal to the best, especially in the Eastern partes; even from Truro eastward is in a manner wholly Englishe. In the west parte of the county, as in the Hundreds of Penwith is to be marvelled that though husband and wife, parents and children, master and servauntes, doe mutually communicate in their native language, yet there is none of them but in manner is able to converse with a stranger in the English tongue, unless it be some obscure persons that seldom converse with the better sort.

Richard Symonds in 1644 says, 'about Pendennis and the Land's End they speak no English,' indicating that there were still monolingual areas. In 1707 Edward Lhuyd remarks that many of the people, especially the gentry, do not understand Cornish and that every Cornishman speaks English.

According to popular legend the last speaker of Cornish was Mrs. Dolly Pentreath, who died in 1778 at the age of 102, but there is some evidence that some others may have survived her. Whoever was the last to speak the language, echoes continued for at least seventy-five years, for in 1875 W. S. Lach-Szyrma and H. Jenner reported having interviewed six people of 60 years of age and upward who knew some words of Cornish. Three of them could count from one to twenty. They knew about twenty isolated words, and three sentences whose meanings are: (1) 'Mackeral, mate, third, fourth, fifth, sixth' and the rest in English 'all ascrowd all along the line oh' (that is, they are too thick to count), (2) 'splashing backward and forward in the water,' (3) 'Lend me your stick to walk.' These translations are supplied by Jenner, the informants themselves had only rough ideas as to what the sentences meant.[7]

4. Mohican. Despite the title of James Fenimore Cooper's famous novel, The Last of the Mohicans, there still exists a community of 125 or more Mohicans in Shawano County, Wisconsin. The language continued in active use until a generation or two ago, and several of the people still know bits of it. The present-day language of the community is English.

In 1734, John Sergeant went as missionary among the Mohicans. He learned their language and worked energetically among them. Soon he formulated a large-scale plan of accomplishing their christianization and 'civilization.' He conceived of a boarding school where the children of the tribe, both girls and boys, would come to learn their letters and arts and crafts, like farming, blacksmithing, carpentry, sewing, cooking. Sergeant did not live to see his plan carried out, but the school was established in 1749 and proved successful. In 1791, the editor of The Massachusetts Historical Collections wrote: 'The Indians are civilized. All speak and write English. The men are good farmers. The women good housekeepers.'[8]

In 1785 the Mohicans moved from their original home around Stockbridge, Massachusetts, to Western New York and in 1822 they moved again to the State of Wisconsin. Both of these migrations and another removal within Wisconsin came about only because of outside pressure, for the Indians

[7] This account based on H. Jenner, The Cornish Language, Phil. Soc. of London 1873–4.165ff; Traditional Relics of the Cornish Language, Phil. Soc. 1875–6.533ff. The quotations from Norden and others are to be found in these articles.

[8] Quoted in Joseph Schafer, The Winnebago-Horicon Basin, Madison State Historical Society of Wisconsin 1937, p. 38.

each time preferred their former home. The government policy, when Indian tribal lands became desirable to speculators or settlers, was to offer the Indians some new land beyond the frontier and some cash inducement in exchange for their old land. Later the advancing frontier would catch up with the Indians and the land question would come up again. Desiring to settle the matter once and for all, the government urged the Indians to become citizens of the United States, with individual land-holdings and no tribal guarantees. The issue of citizenship split the tribe into two parties. Congress declared them citizens in 1843 and was forced by tribal pressure to repeal the act in 1846. In 1906 they were again made citizens with privately held land, but in the thirties, by cooperation of the Indian Bureau and the Resettlement Administration, a reservation was provided for those who wished to live on it.[9]

We have no contemporary data on how the experiences and problems of the Mohicans reacted upon the language. Our information is recent. Until about sixty years ago there were Indians who habitually spoke Mohican. In 1938 there were four or so who knew some words of it. These people as children spoke the language with their grandparents, but this was so long ago that not one was still capable of speaking more than isolated words and a limited number of set phrases. Those who knew something of the language were proud of this knowledge and were known for this special ability among all the members of the tribal remnant. They themselves said they often exchanged sentences in Mohican to impress other people. Mrs. Robinson told me she used Stockbridge for 'blackguarding' at people, particularly those others who knew what the words meant. It may be of interest to remark that the four people reputed to know most about the languages were not among those who had chosen to take advantage of the new reservation.

The Mohican vocabulary collected in 1938 contained several Dutch words, in assimilated form, evidently reflecting contact with the Dutch in New York State.

5. Chitimacha. Not long after their first contact with the French, the Chitimacha of Louisiana became involved in a long war, suffered repeated raids instigated by the French, and finally had to sue for peace. Starting with a population estimated at 2600,[10] they must have lost heavily from the raids in killed and captives sold into slavery. Subsequently, in two and a half centuries, their population continued to dwindle—probably through disease as well as dispersal—until they number about 65, now living around Indian Bend on Bayou Teche. Their language declined in usage against the competition of French and more recently of English.

In 1934 there were still two individuals who spoke Chitimacha well. Benjamin Paul, who died in that year at the age of 66, told me he had often talked the language to himself in order to keep up the memory of it. Delphine Ducloux, then 62, who died in 1940, had talked the native tongue with her aged aunt until the death of the latter several years before. Mr. Paul was a purist in Chitimacha: once he refused to dictate a myth because he could not remember the native word for 'skunk.' He preferred to talk French or English rather than mix foreign words into his Chitimacha. Such qualms were not shared

[9] This account, except for the last datum, taken from Schafer, ibid., chapters III and IV.

[10] John R. Swanton, Indian Tribes of the Lower Mississippi Valley, BAE-B 43.45 (1911), gives the following approximate figures on population: 2625 in 1698, 700 in 1758, 350 in 1784, 50 in 1908. (Compare the last figure with the present one, 65, and there appears to have been a slight increase in the latest period.) Swanton's book has been our immediate source for statements about the history of the Chitimacha. The description of present-day conditions is based on personal observations.

by Mrs. Ducloux. In addition to these two speakers, there was Mr. Paul's younger sister, Pauline, who could understand almost anything in the language and who could make herself understood in it. One of Mrs. Ducloux's sons knew a number of Chitimacha words and would sometimes ask his mother for additional expressions. Several women in the tribe know the Indian names of the different types of baskets and basketry designs, and a few words are probably known to other members of the tribe.

About twenty miles away from the Indian community, across the bayou in a Negro settlement, lived two former speakers of Chitimacha, cut off from all ordinary contact with the others by the patterns of race segregation. They were both senile to the point where it was impossible to get satisfactory linguistic material from them, but it was clearly evident that they had once had native control of Chitimacha. One woman had some sort of disorder of hearing, so that, as she repeatedly stated when I visited her, she could hear me talking but could not hear what I was saying. 'Was it someting about the Indian language? Well, nup is an Indian word and means *potato*.' All the while she was very interested in a neighbor's baby and, in her gurgling and talking about babies, it was impossible to learn any more about her knowledge of Chitimacha. Nearby lived Sadie Darda (died 1935), of Negro and Indian descent, who was only slightly senile. She was surrounded by a number of children and grandchildren, who, along with all the neighbors, looked up to her for her knowledge of the Indian language and probably also of mystic lore. When asked for Indian vocabulary, Mrs. Darda dictated a most remarkable mixture of Indian words and invented vocables, for the most part based on French or English with some twist or change. We may illustrate with the numerals from one to twelve: anku (Chit. ʔunku), antu (Eng. *two*), čašinam (Choctaw tučina), fatiam (Eng. *four* of *forty*), hustina (Chit. husa), sakine (Eng. *six*), setu (Fr. *sept*), etu (Eng. *eight*), nantiya (Eng. *nine* or *ninety*), disiti (Fr. dix), onziya (Fr. *onze*), duziya (Fr. *douze*). When asked for a word, Mrs. Darda never hesitated a moment in giving one of her vocables, only occasionally saying she did not remember; she must have been at least partly conscious of inventing forms in order to maintain her role as one who knew much ancient lore. She climaxed her performance by singing an 'Indian' version of Casey Jones, whose words were Chitimacha-sounding nonsense vocables.

On the subject of social distances that have affected the preservation of Chitimacha, we may note that the Indian community is relatively isolated, both from the local Whites who look down on the Indians, and from the Negroes whom the Indians avoid to maintain their standing. Indians who marry Negroes are ostracized. Intermarriage of Indians with Whites for the most part takes place in distant places (as New Orleans), because of the local prejudice. The Indians tell that the local French a number of years back completely accepted them, but the younger generation has set up a social barrier. The oldest people as children were educated along with White children in a French convent school. After its close there was no school for the Indians, who refused to go to the Negro school and were not accepted in the White school, until a special school was provided by the national Indian administration in 1934. One of the prides of the Chitimacha is the art of making fine basketry; this was a disappearing art fifty years ago, but was revived thru the moral and economic encouragement of a White benefactress. Tourists frequently come to the homes of the Indians to look at the Indian baskets and talk to the people, and language seems always to have been an interesting topic for them. I know of at least three amateurs who have made serious attempts to collect vocabularies of one kind or another, and a good many visitors ask

casually about the words for baskets and other things.

6. Natchez. In the early days of Louisiana the Natchez were strong enough and bold enough to join with the Choctaw in an all but successful effort to drive the French out. When the plan failed because of a last minute withdrawal on the part of the Choctaw, the French set out to destroy the Natchez. A large part of the tribe was killed in battle or sold into slavery in the West Indies. A few hundred escaped to the Chickasaw. When the French attacked the latter for harboring them, the Natchez moved on, some going to the Creek Nation and some to the Cherokee. There is every reason to believe that the Natchez were made completely welcome in both of these groups, that there was no policy of discrimination or segregation. Considerable intermarriage took place, and accounts indicate that the Natchez early became bilingual or polylingual. Both the Creek and Cherokee were large tribes, much larger than the remnants of Natchez that settled with them. Though it was the language of a small minority, Natchez continued to be spoken until today, two hundred years after the exile. In view of this remarkable fact, it is interesting to note the following remark by Mooney:[11] 'They seem to have been regarded by the Cherokee as a race of wizards and conjurers, probably due in part to their peculiar religious rites and in part to the interest which belonged to them as the remnant of a broken tribe.'

In 1907 there were still five persons living in the Cherokee Nation near Braggs, Oklahoma, who could speak Natchez. Of these, two were still alive in 1939, Watt Sam and Nancy Raven. Both spoke good Creek and Cherokee in addition to Natchez. They understood English fairly well, and Watt Sam could speak it, but preferred not to. If some other Indian were present who knew English he would address his remarks to the latter and let him translate. His wife was Cherokee and their children spoke Cherokee. His only opportunity of speaking Natchez was when he happened to meet Mrs. Raven. Nevertheless, his knowledge of the language was faultless. His Creek and Cherokee were about equally good; he could read and write Cherokee in the Sequoya syllabary. Mrs. Raven was perhaps more conversant with Cherokee than with Natchez, and she spoke Natchez with something of a Cherokee accent.

Mr. Sam had an extensive repertory of myths and stories, which seem from their content and references to be partly original Natchez, partly new material which must have been added since the old days of the Natchez Nation. All of it was distinct from Creek and Cherokee lore. Likewise his Natchez contained few, if any, Creek or Cherokee elements. But, aside from language and narratives, all folk recollection of the ancient Natchez was gone. When the names of the old castes, Suns, Nobles and Stinkards, were repeated to him, Mr. Sam recognized them as words but had no knowledge of the social order in which they were used.

In addition to the two speakers mentioned, quite a number of Indians among the Creek and Cherokee claim descent from the Natchez and there is a settlement in Oklahoma known as Natchez Town because of the ancestry of the inhabitants. However, only one old woman, Peggy Leaf, knew some Natchez words, which she spoke with a Cherokee accent.[12]

7. Catawba. A few hundred Catawba Indians occupy a reservation in South Carolina, where they live mainly by farming. The women make Indian pottery, the only such still produced east of the Mississippi

[11] See AA 1.517.

[12] Historical material on the Natchez in Swanton, op. cit. 45ff. Contemporary information supplied by Mary R. Haas, who has done extensive research on Natchez language and ethnology.

River, and it is sold both on the reservation and at various stores and resorts in the neighborhood. In 1937, when I visited the Catawba, Sam Blue, the chief, who was also an elder of the Mormon Church, was in the habit of putting on a feather headdress on Sundays and greeting and conversing with sight-seers and visitors. When a number of people were present and he was asked, he would oblige with an Indian song, a few sentences in Catawba or a bit of dancing. There were generally a few other Indians about the reservation cross roads on Sundays and they too would answer the questions of the curious. Small articles of pottery were displayed on stands and some sales were made. Not all the Indians live on the reservation; some live in the town of Rock Hill and work in the mills there.

Besides Chief Blue, there were two other people who had spoken the language in their childhood. The chief's half-sister, Sally Brown, knew even more of the language than he—her vocabulary was larger, but both were quite fluent and sometimes used Catawba in conversation with each other. Sam Harris, having spent much of his life off the reservation, was no longer conversant with Catawba. All three speakers were well over sixty. There were others who knew a few words of the language, but no one else who had any semblance of the ability to speak it. Within the ten years prior to my visit, four other speakers had died.

8. Penobscot. Penobscot will surely last another few decades but is not likely to continue longer than that.

Among the four hundred odd inhabitants of Indian Island near Old Town, Maine, a score or more of older Indians can talk the old language well, and a few insist on doing so whenever possible. Among middle-aged people there are more who understand it than can speak it. The youngsters hardly learn it, and those who do learn some at home forget it after they start school. English is the usual language on the island. Yet they still have their own tribal government and are very definitely a community unto themselves. They live by farming and other pursuits common among the non-Indian inhabitants of the region. During the hunting season, some of the men hire out as guides. The women make and sell baskets and other souvenirs to tourists, and some tribal revenue is earned by the two-oar ferry that takes tourists back and forth between the mainland and the island.[13]

9. Mashpi. The original nucleus of the Mashpi was the Wampanoag tribe of Cape Cod, Massachusetts, one of the good neighbors of the Pilgrim fathers in the Plymouth Colony. As the immigrants increased, they absorbed the Indians' territory and made their old existence by hunting and fishing impossible. In return they took some responsibility for their well-being. If the Wampanoags were friendly to the struggling Pilgrims, they also offered friendship and refuge to other unfortunates. Indians of other tribes and escaped Negro slaves came into the community. Their town was a terminal of the underground railway. There were no taxes, and the state gave some attention to economic distress. In 1870 the people became United States citizens. A special economic situation developed out of the fact that the country became a vacation resort where most of the land belongs to nonresident owners of summer homes while the use of public funds is determined by the votes of the resident Mashpis. These earn a large part of their living by seasonal work for the summer residents or by municipal jobs; some subsist on state or municipal relief. The maintenance of the Indian tradition and the continuation of certain tribal ceremonies are strongly encouraged by the peculiarities of their present situation. The people go so far as to supplement their

[13] Information from personal observation supplemented by Frank Siebert, who made several visits to the Penobscot in the course of linguistic research.

knowledge of aboriginal ways by consulting Speck's scientific monograph, The Mashpi Indians.[14]

But, while the community has continued in spite of the wholesale assimilation of outside elements, the language has long ago gone out of use. It has not been spoken for about three generations and the last person who knew any words of it died in the late twenties.[15]

10. Conclusion. Of all the cultural facts that identify and characterize a community, language is one of the more deep-seated and persistent. But it is not immutable, and in a period of a few generations or thousands of years a community may drop one language in favor of another. Frequently the community itself is transformed along with the linguistic switch. That is, only as the community is surrounded and absorbed into a larger community, does it tend to drop its old language and to take on that of the larger group. The process does not move uniformly but usually first affects certain sections of the people—defined in terms of geographical location, age-group, sex, economic and cultural status—and certain types of personality. Once the new language is widely adopted, there are certain groups and personalities that persist especially in retaining the old language. These differences of receptivity, both in the initial and in the final stages, point up the structure of the community and the kinds of personality that develop in it. From these considerations comes the significance of studying the sociology of obsolescent languages.

Ethnologists and linguists who go to the field among any people who are on the road to losing an earlier language should make the most of their opportunity to gather careful systematic data on what is taking place. It is desirable that they not only note how many in each sex and age group are bilingual or monolingual in each of the languages, but also report fully on the social pressures and trends, the attitudes taken by different individuals and sectors of the community, current philosophies about the choice of language, correlation with social and economic position, the use of the languages in different social settings, special symbolisms attached to the use of language, and all the other pertinent facts. Obviously we have here a rich area in which to observe the interplay of culture and personality. Field workers are therefore urged to collect autobiographies and individual case studies from people whose lives are particularly revealing as to the sociology of language conflict.

The present paper has not attempted to discuss the effect of social obsolescence on the language system itself. Even though the effect is surprisingly little in quantity, it is very important to observe which features of vocabulary, morphologic structure and phonetics give way first and which persist to the last. In part these items are determined by the similarities and differences in the two languages, in part they reflect what may be described as weak points in the language pattern. They have to be interpreted with care, taking into account that language patterns suffer modifications even when no situation of rivalry exists. It is usually safer not to declare that such and such is caused by the obsolescent state of the language, but one should be careful to note every instance where there is inconsistent use, particularly where there are differences between the generations or between the conservative and unconservative speakers. One should also record the judgements, of praise or criticism, that one hears expressed for one or another style of speaking.

It is perhaps necessary to point out that the factors determining the obsolescence of languages are non-linguistic. There are no such things as inherently weak languages

[14] Indian Notes and Monographs, vol. 44.

[15] Information on the Mashpi supplied by John H. Useem. See also Zimmerman-Useem-Ziegler, Littleville, a Parasitic Community during the Depression, Rural Sociology 1.54ff.

that are by nature incapable of surviving changed social conditions. Some might imagine that the languages of hunting or pastoral groups cannot adapt to the needs of an agricultural or industrial society. But history proves the contrary. Every language that today is used by peoples carrying on advanced modern industry and science was once used by people in simpler economic and cultural stages. By the application of old terms and descriptive phrases to new situations or by the adoption of foreign words, the new vocabulary needs are met. As for different kinds of linguistic structure, none has ever prevented the adaption of a language to a new cultural context.

There is little point in trying to draw from the preliminary material presented in this paper any serious generalizations about the sociology of obsolescent languages. Some of the problems stand out with some clarity, most are barely suggested. The main purpose of the present paper is therefore to enter a plea to field workers to seek and report data that may some day make possible a serious general study.

NAHUATL HONORIFICS

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1. Introduction
2. Nouns
2.1. Possessed nouns
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1. One of the features of Nahuatl is the extensive use of "honorific" or polite speech forms, often called "reverentials." In the dialect spoken in the village of Tetelcingo, Morelos, Mexico, such forms are used in a very intricate and highly developed system.[1] The phenomenon is observable in the nouns, pronouns, prepositions, and, most frequently, in the verbs.

2. The principal honorific morpheme is the suffix -ci:n∼-ci:.[2] It has various diminutive, endearing, and respectful connotations. One of its commonest uses is as suffix to proper nouns which are the names of married persons. Lo:lahci: H *Lola*; Mali:nci: H *María*; šo:šekci: H *José*.[3]

This morpheme may also be used in direct address and in exceptionally reverent allusions. tla:ka-tl *man*, tla:ka-ci:n-tli H *mister, Lord* (observed only in connection with President of Mexico or deity), tla:ka-ci-ci:n-te H *men*! (in a speech to the town).[4] teopiški *priest*, te:teopiška:-ci-ci: H *priests*.

-ci:n also occurs, in Tetelcingo, as suffix to a few non-possessed stems, a:-ci:n-tli *water*, yi-ci:n-tli *bean*(*s*), tli-ci:n-tli *fire*, we:wen-ci: *old man*, lama-ci: *old woman*.

2.1. In possessed nouns, prepositions, pronouns, and verbs, the distinction between the use of honorific and non-honorific speech forms is commonly determined by the marital status of the person involved. H forms are usually used in referring to married people, non-H forms to unmarried. Most husbands use non-H in addressing or referring to wives, while wives use H in addressing or referring to husbands.

As a suffix for possessed nouns, -ci: regularly distinguishes the H and non-H categories indicated above. mo-ma: *your hand*, mo-ma:-ci: *your H hand*; mo-ča: *your house*, mo-ča:n-ci: *your H house*. When the noun possessed is plural, the -ci: is reduplicated and the possessed plural suffix -wa is added. mo-ma:-wa *your hands*, mo-ma:-ci-ci:-wa *your H hands*.

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[1] The material on which this paper is based was gathered in this village by the author during the period of 1940–47 in the course of field work conducted under the auspices of the Summer Institute of Linguistics.

[2] The transcription of the phonemes given here, if read with approximately the same phonetic values as the closest Spanish equivalents, will approach very nearly the actual pronunciation, except as follows: i:=[i], i=[ɪ], o:=[u], o=[o], a:=[ɔ], a=[a], e:=[ie], e=[ɛ], tl=[tɬ]. h and w are written as two phonemes, though this analysis is tentative. c = ts. Stress falls on the penult.

[3] In order to facilitate comparison between honorific and non-honorific forms, the latter will be given first and the former second, with the code H to designate the honorifics. HH and HHH will be used to indicate exceptionally reverential forms.

[4] Some of the morpheme junctures which are most helpful for identification of the honorific morphemes are indicated by hyphens. A glossary of some of the more common affixes appears at the end of this article.

3. The third person singular non-H possessive pronoun is i:- *his.* The corresponding H pronoun is te:- *his.* i:-ma: *his hand,* te:-ma: *his H hand.* If the suffix -ci: is then added, it makes an HH form, usually used only in godparental relationships and relative to deity. te:-ma:-ci: *his HH hand,* te:-ko:ne:-ci: *his HH son.* The same distinction obtains in the plural. i:-pil-wa *his sons,* te:-pil-wa *his H sons,* te:-momačtihka:-ci-ci:-wa *his HH disciples.*

3.1 In the possessed prepositions, a further morpheme, -ka: is used with the -ci:n suffix. mo-tlak *near you,* mo-tlak-ci:n-ka: *near you H.* If it is a third person possessor, te:- expresses H and -ci:n-ka: expresses HH. i:-ka *with him,* te:-ka *with him H,* te:-ka-ci:n-ka: *with him HH.*

3.2 In the free pronouns, the following distinctions are made: tehwa *we*, tehwan-te *we H* (used in praying); taha *you singular,* tehwa-ci: *you H singular*; yaha *he,* yehwa-ci: *he H*; nemehwa *you plural,* nemehwan-ci-ci: *you H plural* (also *you HH singular* between godparental relations); nemomawisoh-ci: *you HHH singular* (for ceremonial occasions); yehwa *they,* yehwan-ci-ci: *they H.*

4. It is in the verbs that the most complicated H patterns appear. Outside of -ci:n∼-ci:no there are almost no morphemes which have H as their "primary" function. The H indication is usually made by morphemes which, in other arrangements, serve as reflexive, indirect object, causative, or plural indicators.

4.1 The principal H indicator in the verbs is the prefix mo-. This prefix in non-H verb forms means *object same as subject* (i.e. reflexive or reciprocal object). šomo-tla:lli *sit* (i.e. *put yourself*) *down,* yehwa mo-maka *they hit each other.*

Certain verbs have mo- as a regular or "normal" prefix. šo-mo-pačo *move closer,* šo-mo-se:wi *rest.* These verbs are given an H form by suffixing -hci:no. šo-mopačo-htci:no *H move closer,* šo-mo-se:wihci:no *H rest.* All imperative forms, whether H or non-H become plural by suffixing -ka:. šo-mo-se:wi:-ka: *rest* (*plur.*), šomo-se:wi-hci:no:-ka: *H rest* (*plur.*).

One verb distinguishes the H from the non-H form by mo- alone. ši-kalaki *come in,* šo-mo-kalaki *H come in.*

Many verbs normally have a k(i)- prefix indicating *specified object.* These verbs may be called the transitives. When mo- is used as an H prefix with these verbs, it replaces the k(i)-, and a suffix -li serves to indicate the direct object. ši-k-tlahto:lti *read it,* šo-mo-tlahto:lti-li *H read it*; ši-k-ihta *look at it,* šo-mo-hti-li *H look at it.* The -li morpheme, in the non-H verb forms is used with the meaning *second object expressed* (usually indirect object). ši-k-tekiti-li *work it for him,* ši-k-ne:šti-li *find it for him.*

When it is desired to express two non-H third person objects plus second person H, the -li morpheme is used twice. šo-mokišti-li-li *H pull it out for* (*of*) *him.* It may also be used three times. šo-mo-tla:li-li-li-li *H put it on it for her* (e.g. the dress on the doll for the child).

First and honorific third person objects are expressed by the corresponding prefix preceding mo-. ti-ne:č-mo-maki-li *you H gave me,* ti-te:-mo-hti-li *you H saw him H.*

A causative suffix -ti may be added to certain verbs. čo:ka *it is crying,* ki-čo:k-ti-a *he's making it cry.* This suffix also occurs with mo- as an H indicator in certain verbs. ti-k-neki *do you want it?,* to-mo-neki-ti-a *do you H want it?*; ti-teo:siwi *are you hungry?,* to-mo-teo:siwi-ti-a *are you H hungry?*

A combination of the two suffixes above, -lti, occurs in certain verbs with H mo-. ši-pano *pass on,* ši-mo-pano:-lti *H pass on*; ši-pahti *get well,* šo-mo-pahti-lti *H get well.* This class seems to have intransitive verbs only.

A less common causative suffix -wi occurs

with H mo- in a few verbs. ši-tlehko *climb up*, šo-mo-tlehka-wi *H climb up*; ši-temo *get down*, šo-mo-temo-wi *H get down*.

A few verbs have a -lwi suffix for the same function. ši-k-ciko *memorize it*, šo-mo-cika-lwi *H memorize it*; ti-k-ihto *you said it*, to-mo-hta-lwi *you H said it*.

A few verbs have irregular H forms. ši-wiya *go*, šo-mo-wika *H go*; ši-wala *come*, ši-wal-mo-wika *H come*; ši-k-wal-ika *bring it*, ši-wal-m-iki-li *H bring it*; ši-koni *drink it*, ši-m-i:ti *H drink it*; tli t-aš-tika *what are you doing?* tli ti-mo-i-li-a *what are you H doing?*

Most of the tense-aspect indicators are suffixed to the H form of the verb without modification of either stem or affix. to-mo-miki-ti-a *you H are dying* (-a is a present tense suffix for certain verbs), to-mo-miki:-ti-s *you H will die*; to-mo-tlačia-lti *you H watched*, to-mo-tlačia-lti-tika *you H are watching*.

4.2 There is also an H indicator for the third person forms of verbs. For a large number of verbs this indicator is -wa. ki-neki *he wants it*, ki-neki:-wa *he H wants it*; koči *he sleeps*, kochi:-wa *he H sleeps*.

For another large class the third person H morpheme is -lo. ki-wi:ka *he carries it*, ki-wi:ka-lo *he H carries it*; k-ihta *he sees it*, k-ihta-lo *he H sees it*.

In this class, if the verb is normally of the reflexive (mo-) type, mo- is replaced by ne- in the H form. mo-ko:ko-a *he is sick*, ne-ko:ko:-lo *he H is sick*; mo-tla:li-a *he sits down*, ne-tla:li:-lo *he H sits down*.

A few verbs have irregular forms for the third person H. wi:ci *he is coming*, wi:-lo-a-c *he H is coming*; iya *he is going*, wi:-lo-a *he H is going*; i:-ka-ka *he is*, i:-lo-a-k *he H is*.

The plural of the third person H forms is usually made by a type of initial reduplication. wi:-lo-ac *he H is coming*, wih-wi:-loac *they H are coming*; i:-loak *he H is*, i:-hi:-loak *they H are*.

The future third person singular H is identical with the future third person plural non-H. They are distinguished only by the free pronouns. yehwa ki-tla:li:-s-ki *they will put it*, yehwa:-ci: ki-tla:li:-s-ki *he H will put it*; te:č-yeka:na-s *he will lead us*, te:č-yeka:na-s-ki *he H* (or *they*) *will lead us*.

The future third person plural H may be the same as the singular and distinguished only by the free pronoun, or it may be reduplicated. yehwa:n-ci-ci: ki-tlah-tla:li:-s-ki *they H will put it*.

The H future of the verb miki *he dies*, miko-a *he H dies*, is formed by suffixing -s only. miki-s *he will die*, miko-a-s *he H will die*.

The past third person singular H is the same as the third person plural non-H. yaha ki-tla:li *he put it*, yehwa ki-tla:li-h-ki *they put it*, yehwa:-ci ki-tla:li-h-ki *he H put it*. The H plural may be the same as the singular or reduplicated. yehwa:n-ci-ci: ki-tla:li-h-ki or ki-tlah-tla:li-h-ki *they H put it*.

The H imperfect is formed by suffixing -ya to the H present. yehwa:ci koči:wa *he H is sleeping*, yehwa:ci: koči:wa-ya *he H was sleeping*. Less regular is the following: yehwa:ci: kitla:li:lo *he H puts it*, yehwa:ci: kitla:li:lo-wa-ya *he H was putting it*.

In references to deity, the third person H is identical with the second person H except for the prefix ti- *second person singular* (or ne- *second person plural*) which are omitted from the third person forms. tla:kati *he is born*, mo-tla:kati-li-a *he HH is born*; ki-neki *he wants it*, ki-neki:-wa *he H wants it*, ki-mo-neki-ti-a *he HH wants it*, (cp. to-mo-neki-ti-a *you H want it*); nehnemi *he walks*, nehnemo-a *he H walks*, mo-nehnemi-ti-a *he HH walks* (cp. to-mo-nehnemi-ti-a *you H walk*).

4.3 The combinations of H and non-H subjects and objects are sources of further intricate adjustments. Compare the following: yaha mic-maka taha *he* (*non-H*) *gives it to you* (*non-H*), yaha mic-mo-maki-li-a tehwa:ci: *he* (*non-H*) *gives it to you H*.

naha timic-ilwi-a taha *I tell you* (*non-H*), naha timic-mo-lwi-li-a tehwa:ci: *I tell you H*.

Notice a first person plural H object in the following: yaha te:č-mo-maki-li-a tehwa *he* (*non-H*) *gives it to us H*. This may represent a trace of an inclusive first person plural, with the H verb form given because of the inclusion of *you H* in the plural *us*.

Samples of further combinations: ki-tlejko-k *he raised him up*, te:-mo-tlehka-wi-li:-lo:-k *he* (*God*) *raised him* (*the president*) *up*. ma-neme:č-mo-malwi-li:-ka: *may he* (*God*) *carry you H*, te:č-malwi:-lo *he* (*God*) *has carried us* (exclus.). ti-te:-mo-lwi-li-a *we are telling him* (*God*). ti-te:č-mo-lna:-miki:-ti *you H remembered us*. ma-ki-maka-ka: *may he H* (or *they non-H*) *give it to him*.

Many HH and HHH sequences are used in godparental relationships and on ceremonial occasions. These consist, in the imperative, of the second person singular H form plus -ci:no, making HH. Further suffixation of the plural -ka: to such HH sequences produces HHH. Thus, ši-pano *pass on* (*you sing.*), ši-mo-pano:-lti *pass on* (*you H sing.*), ši-mo-pano:-lti-ci:no *pass on* (*you HH sing.*), ši-mo-pano:-lti-ci:no:-ka: *pass on* (*you HHH sing.*)

5. Some of the commoner morphophonemic alternations in the above material are: i+mo>omo; V+li>ili; mo+i>mo; mo+a:na>ma:na; k+k>hk; čo:ka+ti>čo:kti; mati+ti>mačti; tlehko+wi>tlehkawi; mo+wika+li>mikili; ciko+lwi>cikalwi; miki+a>mikoa; ti+ayi+tika>taštika; ti+mo+ayi+lia>timoilia; nehnemi+a>nehnemoa; mo+i:ti>mi:ti.

6. Glossary of affixes: -a *present tense* (suffix with a certain class of verbs); -ci:(n)(o) *honorific*; -h *past tense* (suffix with a certain class of verbs); i:- *his*; -k *past tense* (suffix with a certain class of verbs); -ka: *imperative plural*; -ka: *locative* (suffix on certain prepositions); k(i)- *third person singular specified object* (non-H); -ki *past* and *future plural*; -li *second object specified*; -lo *third person honorific*; -lti *causative*; -lwi *causative*; mic- *second person singular object*; mo- *your*; mo- *object* (same as subject); ne- *third person honorific*; ne(n)- *second person plural subject*; neme:č- *second person plural object*; ni- *I*; ne:č- *me*; -s *future*; ši- *imperative*; -ta *durative*; te:- *honorific third person singular object* or *possessor*; -te *plural* (suffix with a certain class of nouns); te:č- *us*; ti- *second person singular* or *first person plural*; -ti *causative*; -tika *durative*; timic- *second person singular object*; tla- *unspecified object*; -tli, -tl *unpossessed singular* (noun suffix); -wa *possessed* (noun plural); -wa *third person honorific*; wal- *direction toward speaker*; -wi *causative* (?); -ya *imperfect*.

YUCHI PHONEMES AND MORPHEMES, WITH SPECIAL REFERENCE TO PERSON MARKERS[1]

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1. Vowels
2. Consonants
3. Word matrix
4. Stems
5. Prefixes
6. Suffixes
7. Affixes prefixed or suffixed

1.0. The distinctive features of Yuchi vowels are: oral production versus nasality (marked by hook under vowel); shortness versus length (marked by superior dot); six tongue positions (marked i, e, ä, a, o, u). Examples are given in the following six paragraphs, showing short, long, nasal, and oral for each tongue position.

1.1. /i/: ičі *tobacco*, wehiki·le *it's very dangerous*, š?į *worthless*, š?į·le *extremely worthless*.

1.2. /e/: ce *water*, ce·daba *I am strong*, sę *it is good*, hę·k?ǫ *they use*.

1.3. /ä/: yähä *drunk*, k?ätä·wi *cross*, wą̈t?e *woman*, yäš?äyą̈·we *ceremonial arbor*.

1.4. /a/: hǫga *he comes*, hǫgą *he rests*, ša·fa *moon*, hę·lą· *they find*.

1.5. /o/: dičo?o· *my uncle*, co·nǫ *the Sun*, hǫk?ǫ *he makes*, sohǫ·de *and then*.

1.6. /u/: yuhe *house*, yu·he *way up there*, hǫk?ac?ų *they kiss each other*, hǫčučų·de *after they had beaten*.

1.7. The above listing may be represented phonemically as 13 vocalic phonemes: i, e, ä, a, o, u; į, ę, ą̈, ą, ǫ, ų; and length /·/.

1.8. Vowels occur in word initial, medial, and final. Nasal vowels have a free variant, oral vowel + homorganic nasal, before stops; thus, hǫk?ǫ *he makes* is phonetically actualized [honk?õ] or [hõk?õ]; dǫpa *hand* is [dompa] or [dõpa]; hędе *then* [hende] or [hẽde].

2.0. The 19 Yuchi consonants may be listed in a chart showing major contrasts:

CONTRASTING CONSONANTS:
a) voiceless: p, t, k, č
b) voiced: b, d, g, ǰ

NON-CONTRASTING CONSONANTS:
a) voiceless: f, s, š, h, c, ?, ƛ
b) voiced: n, l, w, y

Important allophones and their distribution are listed in the following paragraphs.

2.1. Stops p, t, k and palatal affricate č are voiceless and unaspirated; they are lenes initially before vowels, fortes between vowels and in clusters with other consonants. Voiced stops b, d, g are heard slightly unvoiced in clusters before ?. Palatal affricate ǰ is always voiced and occurs only before and between vowels.

2.2. /f/ is a labiodental fricative, sometimes voiced between vowels; thus, agąfa *day* may be heard as [agãfa] or [agãva]. f is voiceless in all other positions: f?a·de [f?a:de] *snake root*.

[1] Data for this paper were obtained from members of the Yuchi tribe in Sapulpa, Creek County, Oklahoma, during a field trip, in the summer of 1947, under a grant from the Indiana University research fund, which is hereby gratefully acknowledged. For an earlier treatment of Yuchi, see Günter Wagner, Yuchi, extract from Handbook of American Indian Languages, Vol. III (New York, 1934).

2.3. /c/ is voiced initially before long vowels: co· [dzo:] *sun*; voiceless [ts] in other positions: ce [tse] *water*, dicet?ę [ditset?ẽ] *my father*.

2.4. /λ/ ís a lateral affricate, voiced [dl] between vowels, as in däλä [dædlæ] *four*, da·λa [da:dla] *wolf*, hę·λą· [hẽ:dlã:] *they find*. It is voiceless [tł] in all other positions: ipiλ?o· [ipitł?o:] *cigarette*, λaš?uha [tłaš?uha] *arrows*.

2.5. /?/ is recorded in two allophones, glottal stop [?] and velar fricative [x] before p, t, k, č; in this distribution the fricative may be said to be the "preferred" allophone, although [?] is occasionally heard. Thus, b?a?te *horse* is usually heard as [b?axte], sometimes as [b?a?te]. Otherwise [x] might have been listed as an allophone of /h/ before p, t, k, č.

2.6. /h/ occurs only before vowels and as second consonant in clusters with p, t, k.

3.0. The Yuchi word ends in vowel; word stress is final. Vowels (V) and consonants (C) appear in the following syllabic sequences: V, CV, CCV, CCCV; single consonants and consonant clusters occur in syllable initial.

3.1. Most consonant clusters are of the CC type; of these, 11 have ? as second C (p?, t?, k?, b?, d?, g?, c?, f?, s?, š?, λ?); 6 have ? as first C (?p, ?t, ?k, ?č, ?l, ?y); three have h as second C (ph, th, kh); four have a fricative as first C (st, št, sp, šp); 12 have semi-vowel as second C (ty, ky, by, dy, gy, cy, čy, sy, tw, kw, gw, čw); there remains one other CC cluster (tn).

3.2. In clusters of the CCC type, four have a fricative as first C (st?, št?, skw, s?y); there remain two other CCC examples (k?y, č?w).[2]

[2] We list here the principal morphophonemic alternations in Yuchi speech. Judging by the information obtained, and checked with several informants, it appears that these alternations are free, although most of them occur "automatically" in conversational and narrative speech.

Most alternations involve vowel changes:
i-we ~ u·; go·špi-we-nǫ ~ go·špu·-nǫ *Negro*
u-we ~ u·; šu·-we-nǫ ~ šu·-nǫ *fish*
a-we ~ o·; cya·ca-we-nǫ ~ cya·co·-nǫ *crawfish*
ä-we ~ o·; lä-we-tä ~ lo·-tä *they did not want*
e-we ~ o·; šagę-we-nǫ ~ šago·-nǫ *beaver*
o-we ~ o·; kayo·wo-we-nǫ ~ kayo·wo·-nǫ *Kiowa Indian*
V-V ~ V?V; aga-ištu ~ aga?ištu *six days*
V̨-n ~ Vn; hǫ-k?ǫ-ne ~ hǫk?one *they used to make*.

[3] Prefix 13. is here postulated as a separate morpheme, because of a slight difference in meaning between 12. and 13. An analysis of this distinction—possibly involving nature of possession—has not been attempted here.

4.0. Noun stems in Yuchi are clearly distinguished from verb stems on the basis of their distribution with affixes.

4.1. Noun stems appear in distribution with person marker prefixes (10, 20, treated under **5.** below); with prefix 61, third person markers (30, under **7.** below), and locatives (40, under **7.** below); with suffixes 73, 74, 75, 76, and decade 90 (see **6.** below); they also appear without affixes.

4.2. Verb stems appear in distribution with person marker prefixes (10, 20, 30, treated below); with prefixes of decade 60 and suffixes of decade 80. Verb stems never occur without affixes.

5.0. The prefixes of Yuchi are listed in the following two paragraphs.

5.1. PREFIXES MARKING PERSON (numbered below in decades, 10 for first person, 20 for second person, and 1 and 2 for reflexives and objectivizers):

1. -de-	*reflexive*
1.1. -dyo·-	*reflexive, transitive*
2. -ce-	*object*
2.1. -cyo·-	*object, transitive*
11. ce·-	*concerning 1st pers. sing.*
12. cyo·-	*1st pers. sing. possessive*
13. co·-	*1st pers. sing. possessive*[3]

14. di-	*concerning 1st pers. sign.*
14.1. do·-	*1st pers. sing. actor*
15. ǫ-	*concerning 1st pers. plur. inclusive*
15.1. ǫco·-	*1st pers. plur. incl. indir. obj.*
16. nǫ-	*concerning 1st pers. plur. exclusive*
16.1. nǫco·-	*1st pers. plur. excl. indir. obj.*
17. we-	*us, for us*
21. so·-	*2nd pers. sing. possessive*
22. ne-	*concerning 2nd pers. sing.*
22.1. yo·-	*2nd pers. sing. actor*
23. ą-	*concerning 2nd pers. plur.*
23.1. ayo·-	*2nd pers. plur. actor*
24. aso·-	*2nd pers. plur. possessive*

All morphemes designated "concerning . . ." carry possessive meaning when prefixed to noun stems.

5.2. OTHER PREFIXES (numbered below in decades and classified according to decades 50 and 60):

51. wa·-	*interrogative*
52. le-	*this*
53. ne-	*that*
54. ke-	*here*
61. lä- ~ na-	*negative*
62. f?o·-	*under*
63. yu·-	*way over, way up*
64. go·-	*somebody, impersonal*
65. hi-	*with, instrumental*
66. -k?a-	*reciprocal*
67. -k?ǫ-	*with, comitative*

Prefixes of decade 50 appear only in distribution with suffixes of decade 70.

6.0. Yuchi suffixes are listed in the following two paragraphs.

6.1. LOCATIVE SUFFIXES (classified according to numbering, 91–101 = decade 90):

91. -ä	*augmentative*
92. -he	*in, at, to*
93. -?ta	*on top*
94. -di	*inside*
95. -?yu	*away from*
96. -pho·	*under*
97. -pele	*over*
98. -kyo·	*through*
99. -lä	*around*
101. -e·le	*only*

6.2. OTHER SUFFIXES (numbered below in decades and classified according to decades, 70 and 80):

71. -dǫ	*I am*
72. -yǫ	*you are (sing.)*
73. -nǫ	*3rd pers. animate*
74. -fa	*inanimate, sing.*
75. -či	*inanimate, sing.*[4]
76. -ha	*plural*
77. -ę	*verbalizer*
81. -jj	*narrative past*
81.1. -fa	*pluperfect*
82. -?ya	*exhortative*
83. -gǫ ~ -tegǫ	*potential, future*
84. -?le	*interrogative*
85. -hǫ	*emphatic*
86. -·le	*superlative*
87. -ne	*habituative, nominalizer*
88. -déhe	*and when, utterance subordinator*

7.0. AFFIXES EITHER PREFIXED OR SUFFIXED (numbered below in decades, 30 for third person, 40 for other affixes). Affixes of decade 40, with locative meaning, are prefixed to verb stems and suffixed to noun stems. Third person markers (decade 30) are prefixed to verb stems; when prefixed to noun stems, they mark possession; when suffixed to noun stems, they

[4] Suffixes 74. and 75. function as noun classifiers and are thus distinguished by their meaning. Wagner, op. cit. p. 321, postulates definite meanings for these morphemes, but my own investigations proved these to be inconsistent. No definite analysis of meaning of these suffixes has been made, because of the insufficiency of textual evi dence.

mark relationship to the speaker or tribal affiliation.

7.1. Locative Affixes, decade 40.

41. diša *close by, near*
42. čya *in water*
43. čyale *through water*

7.2. Third Person Markers, decade 30.

31. hǫ *he* (man speaking)
32. ę *she, older* (man speaking)
32.1. eyǫ *she, older, actor* (man speaking)
33. o· *he, older* (woman speaking)
34. s?e *he, not older* (woman speaking)
34.1. s?yo· *he, not older, actor* (woman speaking)
35. se *she, not older* (man speaking); *she* (woman speaking)
35.1. syo· *she, not older, actor* (man speaking); *she, actor* (woman speaking)
36. we *non-Yuchi* (all speakers)
36.1. yǫ *non-Yuchi, actor* (all speakers)
37. he· *plural, Yuchi* (all speakers)
38. we· *plural, non-Yuchi* (all speakers)

Morphemes listed with decimal point numbering reflect a subanalysis: all morphemes so designated include the meaning of *actor*. Attempts were made to identify one morpheme which might be said to mark actor (32.1., 34.1., 35.1., 36.1.), without success; thus, if ǫ is isolated from 32.1. and 36.1., it is also found in 31. (which does not mark actor specifically); if yo· is isolated from 34.1. and 35.1., there is overlapping with 22.1.

7.3. Thus there are in Yuchi 12 morphemes marking third person. Of these, four have been discussed as marking actor (eyǫ, s?yo·, syo·, yǫ); affixes numbered 36, 37, 38 are used by all speakers irrespective of sex; 35 is likewise used by both sexes, but with slightly different referent, according to the sex of the speaker; of the remaining affixes, two are used only by men (31, 32) and two only by women (33, 34).

7.4. A different approach would show that both men and women employ one morpheme in referring to their own sex, but two morphemes in making reference to the opposite sex. Before giving a critique of this second analysis, we present a traditional chart which arranges the affixes according to situational meaning (Table I).

TABLE I

Man speaking	Meaning	Woman speaking
hǫ	*same sex*	se ∼ syo·
ę ∼ eyǫ	*opposite sex, older*	o·
se ∼ syo·	*opposite sex, not older*	s?e ∼ s?yo·
we ∼ yǫ	*non-Yuchi*	we ∼ yǫ
he·	*plural, Yuchi*	he·
we·	*plural, non-Yuchi*	we·

7.5. Three objections may be made to this arrangement: (1) by classifying person markers on the basis of situational meaning only, it creates the erroneous impression that they are morpheme alternants; (2) distinction of meaning is completely disregarded in lumping actor morphemes together with non-actor morphemes; (3) the fact that one set of person markers (se, syo·) occurs in both male and female speech, though with a change in meaning, is completely obscured in the table, where se ∼ syo· are twice listed under separate headings. These three objections are obviated in the straight list of morphemes, as given in **7.2.**

CLASSIFICATORY VERBS IN MUSKOGEE

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1. Introduction
2.1. Classificatory verbs in Muskogee
2.2. Number in transitive and intransitive verbs
2.3. Common vs. special usage of dual verbs
2.4. Common vs. special usage of plural verbs
3. Conclusion

1. A number of American Indian languages are known to have fairly elaborate sets of verbs semantically differentiated as to the form or shape (or some other characteristic) of the entity which serves as subject (intransitive verbs) or as object (transitive verbs). Examples of languages known to have this characteristic are Navaho and Cherokee. Cherokee, for instance, has no single verb corresponding to the English verb *to lie*; instead, there are several different verbs distinguished as to the nature of the entity referred to by the subject, such as, *round object lies*, *long object lies*, *flexible object lies*, *liquid lies*, and *living being lies*. A similar multiplicity exists with a number of transitive verbs, except that with them it is the nature of the entity referred to by the object that gives rise to the distinction. Important transitive verbs of this type are those meaning *to give . . .*, *to put . . . in*, *to pick up . . .*, *to bring . . .*, etc. A few sets of Cherokee examples[1] taken from my own field notes may be given for purposes of illustration and later comparison with Muskogee classificatory verbs.

Set 1: ʔáàhhą́ *it's lying* (*round obj.*), čííyą́ *it's lying* (*long obj.*), ką́ʔnáą́ *it's lying* (*flexible obj.*), kàneehą́ *it's lying* (*liquid*), kąhnkáą́ *he's lying* (*living being*).

Set 2: číʔahsį́ *I gave . . .* (*round obj.*), čiitíísį́ *I gave . . .* (*long obj.*), čiiną́hsį́ *I gave . . .* (*flexible obj.*), čiineʔą́hsį́ *I gave . . .* (*container with liquid contents*), čiiyáàkʻáàsį́ *I gave . . .* (*living being—non-human*).

Set 3: čikį́ *I pick up . . .* (*round obj.*), čiyą́ *I pick up . . .* (*long obj.*), činàkį́ *I pick up . . .* (*flexible obj.*), čineekį́ *I pick up . . .* (*container with liquid contents*), čį̨nakį́ *I pick up . . .* (*living being—non-human*), čį̨nakį́ *I pick up . . .* (*living being—human*).

The examples given above are intended to show the categories distinguished in Cherokee classificatory verbs. It is immaterial to the present discussion whether these categories are distinguished by suppletion or by other means.

2.1. So far as I know, Muskogee (or Creek)[2] has not previously been mentioned as one of the languages having this type of verbal complexity. While the phenomenon is not as highly developed as it is in Cherokee, it clearly exists. However, in Muskogee the phenomenon is less transparent than in Cherokee because it is tied up inextricably with the category of number and operates most frequently in verbs characterized by having suppletive forms to express a differ-

[1] The system of notation employed in the Cherokee forms given here is not intended to represent a finished product phonemically or tonemically. For convenience long vowels are written as double vowels. Three levels of tones are shown: low, marked by a grave sign over the vowel (à), mid, by no sign over the vowel (a), high, by an acute sign over the vowel (á). Voiceless unaspirated stops are written as t, č, and k; aspirated stops as tʻ, čʻ, and kʻ.

[2] Muskogee forms quoted in this paper are taken from the author's field notes on the language. Grateful acknowledgment for field grants is made to the Department of Anthropology, Yale University (1936 and 1937) and to the American Philosophical Society (Penrose Fund) (1938–39).

ence in number. It will be of interest to take up the problem systematically.

2.2. The majority of verbs in Muskogee distinguish only two numbers, singular and plural. A few very important and frequently used verbs, however, distinguish three numbers, singular, dual, and plural, and the separate forms are generally suppletive or otherwise irregular. Typical examples of intransitive verbs are:

S	D	P	
litkitá[3]	tukułkitá	pifa·tkitá	*to run*
ayíta	ahuyitá	api·yitá	*to go*
leykitá	ka·kitá	apu·kitá	*to sit*
huyłitá	sihu·kitá	sapaklitá	*to stand*
wakkitá	wakhukíta	lumhitá	*to lie*

Many common transitive verbs are characterized by suppletion to express the number of the object, as in the following:

S OBJ.	D OBJ.	P OBJ.	
aweykitá	aka·yitá	apalatíta	*to throw . . . away*
takleycitá	takka·yitá	takkapu·yitá	*to put . . . down*[4]

Most verbs distinguish only singular and plural number. A few of these have suppletive plurals and some transitive verbs indicate plurality of the object by infixed reduplication.[5] Examples:

S	P	
apaykitá	atihkitá	*to be inside*
apaykitá	atihitá	*to put . . . inside*
wakicitá	lumheycitá	*to lay . . . down*
isíta	cawíta	*to grasp, hold . . .*
halatitá	halatheycitá	*to take hold of . . .*

2.3. In most instances of usage verbs of the above types are distinguished solely on the basis of number, as shown in the following examples:

INTRANSITIVE: hunánwat li·tkís *the man is running*, hunánwat tuku·łkís (*two*) *men are running*, hunánwat pifa·tkís (*three or more*) *men are running.*

TRANSITIVE: pú·sin takléyhceys *I put the cat down*, pú·sin takkáhyeys *I put* (*two*) *cats down*, pú·sin takkapúhyeys *I put* (*three or more*) *cats down.*

However, the distinction in usage of such number-defined verb forms is not always solely a matter of number. Certain very special uses of some of these forms also occur, and it is these which remind us of the classificatory verbs already briefly described for Cherokee.

The first of these special uses occurs when cloth and articles made of cloth are referred to; articles of this type are invariably used with dual intransitive verbs when serving as subjects, and dual transitive verbs when serving as objects. Several examples contrasting the ordinary usage of dual verbs with the special usage afforded articles made of cloth are given below.

pú·sit taklêyks (*one*) *cat is on the floor* (S); pú·sit takkâ·ks (*two*) *cats are on the floor* alongside of: nú·ckat takkâ·ks *a handkerchief is on the floor* (D); pú·sit takkapû·ks (*several*) *cats are on the floor* (P).

pú·sin takléyhceys *I put the cat down* (S); pú·sin takkáhyeys *I put* (*two*) *cats down* alongside of: ká·pan takkáhyeys *I put the coat down* (*on the floor*) (D);[6] pú·sin takkapúhyeys *I put the cats down* (P).

[3] For a brief discussion of the phonemes of Muskogee, see M. R. Haas, Ablaut and its Function in Muskogee, Lg. 16.149–50 (1940). The only change that has been made here is that the back rounded vowel is symbolized by the use of u (short), u· (long) in place of earlier o, o·.

[4] This set of verbs contains the preverb tak(k)- (tak- before C, takk- before V) meaning *down, on the ground, on the floor*. Their analysis, then, is: tak- + leycitá, tak- + kayita, and takk- + apu·yitá. Compare the related intransitive verbs leykitá, ka·kitá, apu·kitá *to sit*.

[5] Note halatitá vs. halatheycitá. The theme occurring in halatheycitá is halatheyc- < halatha-, reduplicated form of halat- (as in the singular verb halatitá), + -ic- ~ -yc-, causative suffix.

[6] Comment of the informant: "Sounds like it ought to mean *I put* TWO *coats on the ground*, but that's because it's something soft." Informants are well aware that this is a special usage of the dual verb and frequently make such comments

In verbs which distinguish only singular and plural number the dual number falls together with the plural and articles made of cloth are then required to be used with plural verbs.

pú·sin î·seys *I am holding a cat* (*in hand, lap*) (S); pú·sin câ·weys *I am holding* (*two or more*) *cats* alongside of: nú·ckan câ·weys *I am holding a handkerchief* (P).

pú·sin halâ·teys *I have hold of a cat* (S); pú·sin halathêyceys *I have hold of* (*two or more*) *cats* alongside of: nú·ckan halathêyceys *I have hold of a handkerchief* (P).

2.4. Another special use of number-defined verbs occurs with liquids. These generally take plural verbs, though examples are less numerous than is the case with cloth-like objects. The most typical examples occur with transitive number-defined verbs, as shown below. (Intransitive verbs generally treat liquids as being in the singular number.) The examples quoted below illustrate not only the use of plural transitive verbs with liquids, but also the use of dual or plural (plural when a dual form is lacking) transitive verbs with cloth-like objects. These examples give us, then, a complete picture of the classificatory use of number-defined transitive verbs in Muskogee.

islá·fkan awéykeys *I threw away the knife* (S); islá·fkan akáhyeys *I threw away* (*two*) *knives* alongside of: nú·ckan akáhyeys *I threw away a handkerchief* (D); islá·fkan apaláhteys *I threw away* (*three or more*) *knives* and: wa·kapisí·n apaláhteys *I poured out the milk* (P).

pú·sin takkíhseys *I picked up the cat* (S); pú·sin takcáhweys *I picked up* (*two or more*) *cats* alongside of: nú·cka takcáhweys *I picked up a handkerchief*; úywan sakcáhweys *I dipped up some water* (P).[7]

3. Muskogee clearly represents an incipient stage in the development of a set of classificatory verbs which we know in a more highly developed form in languages like Cherokee. In Muskogee classificatory verbs are number-defined, i.e., in their normal usage they are either dual or plural verbs. The only categories of classification that have developed are those which distinguish cloth-like objects from liquids, and these in turn from all other types of objects. Cloth-like objects are treated as duals when the verb has a distinctive dual form; otherwise they are treated as plurals. Liquids are treated as plurals. All other types of objects are treated as singulars, duals, or plurals depending upon the actual number of entities involved. It is also interesting to note that the category of cloth-like objects in Muskogee may be compared with the category of flexible objects in Cherokee and the category of liquids in Muskogee may be compared with the category of liquids (or container with liquid contents) in Cherokee.

on the phenomenon. Another common comment: "I don't know why it's that way, but that's the way it is."

[7] The preverb tak(k)- in takcáhweys is explained in footnote 4 above. The form sakcáhweys has two preverbs, (i)s- meaning *with, by means of* and ak(k)- *in the water, in liquid*. The preverb ak(k)- is required here because a liquid is referred to, and (i)s- must be added to that because liquids are dipped up by means of some instrument, e.g. a cup or dipper.

THE APACHEAN VERB, PART IV: MAJOR FORM CLASSES

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1. Purpose
2. Criteria for form classes
3. Neuter and active verbs
4. Class meanings of neuter and active categories
5. Types of neuter verb
6. Imperfective neuters
7. Progressive neuters
8. Perfective neuters
9. The required conjugations of the active verb
10. Choice of imperfective and perfective paradigms
11. Intransitive vs. transitive verbs
12. Active intransitive vs. active transitive
13. Neuter intransitive vs. neuter transitive
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16. Prefixes which require d and l classifiers
17. The passive
18. Simple passives
19. Agentive passives
20. Mediopassives
21. Summary

1. In preceding papers of this series[1] I have described the formal structure of the Apachean verb and the paradigms in which it may be conjugated. My purpose in this paper is to outline the form classes of the Apachean verb and to indicate briefly the function of each form class.

2. Five criteria determine the form class of an Apachean verb construction: (1) the number and kind of paradigms in which its base must be conjugated, (2) the presence or absence of a pronominal prefix in position 7 of the construction, (3) the classifier in position 13, (4) the tense-modal prefixes, if any, in positions 5, 10, or 11, and (5) the phonetic form of the stem.

3. Verb bases conjugated in only one paradigm and having a single stem are called neuters, while those regularly conjugated in seven paradigms (differing in mode, tense, or aspect) and possessing one or more distinctive stems are called actives. The constructions sìtį *he lies* and sìbé·ž *it has boiled*[2] are superficially much alike. Both have the prefix sì-, marking the third person s- perfective paradigm, a zero classifier, and a stem. Further investigation, however, reveals important differences. sìtį is not conjugated for tense, mode, and aspect except periphrastically as in sìtį·-ńté·? *he was lying* (lit. *he lies, it used to be*) or sìtį-dò·lè·ɬ *he will be lying* (lit. *he lies, it will be*). sìbé·ž, on the other hand, is paralleled by the following obviously related constructions: yìbé·ž *it boils* (third person h- imperfective paradigm), yìbìš *it goes along boiling* (third person progressive paradigm), dò·bìš *it will boil* (third person future paradigm), yìbìš *it customarily boils* (third person customary paradigm), nábìš *it boils over and over again* (third person iterative paradigm), and γóbé·ž *would that it boil* (third person optative paradigm).

From our definition, then, ... (s- pf.)-zero-tį *one animate being lies* is a neuter verb base, having no adverbial prefixes, a zero classifier, the stem -tį, and conjugated only in the s- perfective paradigm. ... (h- ipf., s- pf.)-zero-bé·ž, -bé·ž, -bìš, bìš, bé·ž *to boil* is an active verb base with no adverbial prefixes; a zero classifier; the stem -bé·z in the

[1] See IJAL 11.193–203, 12.1–13, 51–59. Terms introduced and defined in these articles are used here without further definition.

[2] All examples, unless otherwise noted, are from Navaho.

imperfective, perfective, and optative paradigms, and -bìš in the remaining paradigms; and requiring the h- imperfective and s-perfective paradigms.[3]

4. Correlated with this structural distinction between neuter and active verbs is a difference in class meaning. Apachean verbs taken as a whole denote not only actions and processes but also states of being that result from action and process. Active verbs, in general, define actions and processes; in active constructions the actor is performing an action or undergoing a process. Neuter verbs, on the other hand, denote states, conditions, attributes, or qualities; in neuter constructions the actor is not doing anything, he is, rather, being described.

This difference in meaning, and the structural distinctions described in §3, are illustrated by the following pairs of neuter and active verb bases:

ʔa- . . . (s- pf.)-zero-ʔą́ *the sun is in position*; ha-ʔa- . . . (h- pf.)-zero-ʔà·h, -ʔą́, -ʔá·ł, -ʔá·h, -ʔá·ł *the sun rises.* čł-yi- . . . (ipf.)-zero-ʔį́ *to be useful*; čł-yi- . . . (s-pf.)-zero-ʔį́, -ʔį·d, -ʔį·ł, -ʔį·h, -ʔį·ʔ *to become useful.* ł-ni- . . . (ipf.)-zero-bá *to be gray*; yi- . . . (h- ipf., h- pf.)-zero-bá·h, -bàʔ, -bàh, -bàh, -bá·h *to become gray.* ná- . . . (s- pf.)-zero-bą̀s *to be round, hoop-like*; nà- . . . (h- ipf., s- pf.)-zero-bą̀·s, -bą́·z, -bą̀s, -bą̀s, -bą̀·s *to roll hoop-like here and there.* . . . (n- pf.)-zero-bà·l *to hang (curtain-like), to be stretched out on a line*; di- . . . (s- pf.)-zero-bà·ł, -bà·l, -bàł, -bàł, -bà·ł *to swing, hang (as on a trapeze).* ha-di- . . . (s- pf.)-zero-bìn *to be full*; ha-di- . . . (s-pf.)-zero-bìn, -bį·d, -bį́·ł, -bį́·h, -bìn *to fill up, become full.* di-ni- . . . (n- pf.)-zero-bìn *several sit lined up in a row*; di-ni- . . . (s- pf.)-zero-bį̀·h, -bìn, -bį́·ł, -bį̀·h, -bìn *several sit down as a group.* ni-ni- . . . (ipf.)-zero-mą̀z *to be ball-like, spherical*; ni- . . . (s-pf.)-zero-mą̀s (in all paradigms) *to become ball-like, spherical.* . . . (s- pf.)-zero-dá *one animate being sits*; ni- . . . (s- pf.)-zero-dà·h, -dá, -dà·ł, dà·h, dàʔ *one animate being sits down, takes a seat.* ʔá-ni- . . . (ipf.)-zero-dìn *to be gone, lacking*; ʔá- . . . (s- pf.)-zero-dį̀·h, -dį̀·d, -dį̀·ł, -dį̀·h, -dį̀·h *to disappear.* ǩí- . . . (s- pf.)-zero-dòn *to be straight*; ǩí- . . . (s- pf.)-zero-dǫ̀·h, dǫ́·d, -dǫ̀·ł, -dǫ̀·h, -dǫ̀·h *to become straight.* ni- . . . (s- pf.)-zero-dòh *to be warm, hot*; ni- . . . (h- ipf., h- pf.)-zero-dó·h, -dòi, -dòh, -dòh, -dó·h *to become warm, hot.* . . . (s- pf.)-zero-tį́ *one animate being lies*; ni- . . . (s- pf.)-zero-tè·h, -tį́, -té·ł, -té·h, -té·ł *one animate being lies down.* . . . (s- pf.)-zero-tą́ *a long slender object is in position*; dàh-di- . . . (h- ipf., h- pf.)-zero-tį̀·h, -tą́, -tį́·ł, -tį́·h, -tą́·ʔ *to lift up a long slender object.* nà- . . . (ipf.)-ł-tìn *to be raining*; di- . . . (s- pf.)-ł-tį̀·h, -tą́, -tį́·ł, tį́·h, tą́·ʔ *to begin to rain.* . . . (s- pf.)-zero-nìl *several objects are in position*; nà- . . . (h- ipf., s- pf.)-zero-nìl, -nìl, -nìł, -nìł, -nìl *to scatter several objects about.* . . . (n- pf.)-ł-cą́ *to be rainy*; nà-ʔa-di- . . . (h- pf.)-ł-cį́·h, -cą́·ʔ, -cį́·ł, -cį́·h, -cą́·ʔ *to rain in a slow drizzle.*

5. Though any given neuter base is conjugated in only one paradigm, it does not follow that every neuter base is conjugated in the same paradigm. Quite the contrary is true, for there are five distinct neuter conjugations: imperfective neuters (i.e. neuters conjugated in the regular imperfective paradigm), progressive neuters, n- perfective neuters, h- perfective neuters, and s- perfective neuters. Our problem is now to examine the differences in class meaning that exist between these five neuter types.

6. Neuter verb bases, it will be recalled, have in general the class meaning *state of being* as contrasted to the meaning *action* of the active verbs. Imperfective neuters ap-

[3] These exemplify the formulae we shall employ in citing neuter and active bases. In active bases, the stems are listed in the following order: imperfective (ipf.), perfective (pf.), future (fut.) and progressive (prog.) (these always use the same stem), customary (cust.) and iterative (iter.) (these also employ the same stem), and optative (opt.). The paradigms listed are described in IJAL 12.1–13; their meanings will be discussed in §§ 6–10 of this paper.

pear to denote attributes or qualities very similar to those expressed by English adjectives; the imperfective neuter has the general meaning *to be possessed of (or to be characterized by) a given quality or attribute.* The following imperfective neuter bases illustrate this point.[4]

čí-yi- . . . -zero-ʔį *to be useful*, di- . . . -zero-ʔíl *to be fluffy (like wool)*, ɬi-ni- . . . zero-bá *to be gray*, ǯi-yi- . . . -zero-bàʔ *to be kind, generous*, ni-ni- . . . -zero-mą̀z *to be ball-like, spherical*, ni- . . . -zero-dà·z *to be heavy*, ʔá-ni- . . . -zero-dìn *to be gone, lacking*, di-ni- . . . -zero-tą́ *to be deep, thick*, yí-ní- . . . -ɬ-tą̀ʔ *to have hold of (it)*, ni- . . . -zero-tè·l *to be broad, wide*, nà- . . . -ɬ-tìn *to be raining*, nà-ni- . . . -zero-ɬá *to be in command*, ʔá-ni- . . . -zero-ɬé *to be thus, so*, hi-ni- . . . -zero-ná *to be alive*, ni- . . . -zero-nè·z *to be long, tall*, di-ni- . . . -zero-nì·h *to be aching*, di- . . . -l-kǫ̀·h *to be smooth*, yi-ni- . . . -l-γé *to be so-named*, di-ni- . . . -zero-γìn *to be holy*, ʔa- . . . -ɬ-γòš *to be asleep*, ni- . . . -zero-zìn *to desire (it), want (it)* (i.e. *to have a desire for [it]*), ʔá-kó-ni- . . . ɬ-zìn *to have (it) in that position*, dì-ni- . . . ɬ-zìn *to keep (it) sacred*, di- . . . -ɬ-zǫ̀s *to be sparkling (like a diamond)*, di- . . . -ɬ-ǯìd *to have (it) spoiling, rotting*, nà- . . . -l-ǯìd *to have oneself in fear, to be afraid*, ǯi-yi- . . . -ɬ-lá *to regard (him) with hatred.*

7. Progressive neuter bases are illustrated only by the following two examples: . . . -zero-ʔį *to have (him) in view, to see (him)* and ha-ʔa- . . . ɬ-kà·ɬ *the front of the pelvic bone (of women) protrudes.* These are obviously too few to permit any statement of class meaning. Other Apachean languages do not reveal further examples.

8. Neuter bases conjugated in one or other of the perfective paradigms (i.e. n-perfective, h- perfective, and s- perfective neuters) appear in general to denote *actor in state of rest, actor in state of being resulting from cessation of action or process.* In s-perfective neuters, the most frequent type, the state of rest is apparently unqualified, but n- and h- perfective neuters seem to imply an added aspectival notion referring back to the action or process which produced the state of rest. N- perfective neuters carry a completive connotation; the actor is in a state of rest resulting from an action that has moved from one fixed point to another. H- perfective neuters, on the other hand, are inceptive in connotation; the actor is in a state of rest which results from an action that has moved out from a fixed point. Examples follow:

N- perfective neuters: (1) nà-ʔa- . . . -zero-ʔá *a rigid object (e.g. a bridge) extends across (e.g. a river)* (cf. 10, 11, 12, 22), (2) ǯi- . . . -zero-bá *to be gray-striped* (cf. 13), (3) . . . -zero-bà·l *(e.g. a blanket) is stretched out on a line*, (4) di-ni- . . . -zero-bìn *several beings sit in a row*, (5) . . . -zero-dá *several beings, one by one, sit in a line* (cf. 32), (6) . . . -zero-dǫ̀n *to be stretched tightly (e.g. of a string)* (cf. 14, 33), (7) nà- . . . -zero-ɬìʔ *a string-like object is stretched across* (cf. 15, 40), (8) di- . . . -ɬ-ká *to be dense, impassable (of a clump of bushes, brush)*, (9) . . . -ɬ-cą́ *to be rainy.*

H- perfective neuters: (10) ʔa- . . . -zero-ʔá *a rigid object extends from a fixed point (e.g. a tree stands erect)*, (11) . . . -ɬ-ʔá *to have a rigid object extending from a fixed point (e.g. to hold an arrow in position by its nock)*, (12) ha- . . . -ɬ-ʔá *to have a rigid object extended out from a fixed point (e.g. to have the tongue sticking out)* (cf. 10, 11, 12 with 1, 22), (13) ha-ǯi- . . . -zero-bá *the earliest dawn appears* (lit. *a streak of gray extends from a fixed point*; cf. 2), (14) ha- . . . -zero-dǫ̀n *to emerge (e.g. from a hole) tightly stretched* (cf. 6, 33), (15) ha- . . . -zero-ɬìʔ *a string-like object extends out (e.g. from a wall)* (cf. 7, 40), (16) . . . -zero-nì·h *to have knowledge of (it)*, (17) ni- . . . -l-zàh *hanging objects (e.g. icicles) are scattered about*, (18) ha- . . . -ɬ-zé·ʔ *to pass wind without noise* (lit. *to have an odor passing out*), (19) di- . . . -zero-ćàʔ *to have (it) within hearing, to*

[4] See also my Chiricahua Loan-words from Spanish. Language, 15.110–15 (1939).

hear (it), (20) hi- . . . -zero-ćó·z *to be pointed*, (21) . . . -l-čòž *to have oneself afflicted by boils.*

S- perfective neuters: (22) di- . . . -zero-ʔá *a rigid object projects (e.g. a rocky cliff extends out into a canyon*, cf. 1, 10, 11, 12), (23) . . . -zero-ʔą́ *a round object is in position*, (24) ʔa- . . . -zero-ʔą́ *the sun is in position* (lit. *a certain round object is in position*), (25) ní- . . . -l-ʔą́ *to have one's head in position* (lit. *to have one's own round object in position*), (26) . . . -ɬ-ʔè·ž *to have (him) as leader, guide*, (27) ni- . . . -ɬ-ʔį·ʔ *to keep (it) hidden*; (28) ná- . . . -zero-bąs *to be round, hoop-like*, (29) nà- . . . -d-bé·ž *several objects lie spread out, scattered about*, (30) ha-di- . . . -zero-bìn *to be full*, (31) . . . -zero-mąs *to lie curled in a heap*, (32) . . . -zero-dá *one animate being is in a sitting position* (cf. 5), (33) kí- . . . -zero-dòn *to be straight* (cf. 6, 14), (34) ni- . . . -zero-dòh *to be warm, hot*, (35) ní- . . . -l-dòh *to have one's own muscles aching*, (36) . . . -zero-tą́ *a long slender object is in position*, (37) nàhí- . . . -zero-tą́ *several animate beings are in a sitting position*, (38) . . . -zero-té·ž *two animate beings are in a lying position*, (39) . . . -zero-tį́ *one animate being is in a lying position*, (40) O-ná- . . . -zero-ɬì·ʔ *a string-like object extends around (it)* (cf. 7, 15), (41) . . . -zero-nìl *several objects are in position*, (42) dá-dí-nì- . . . -d-nó·d *to have one's lips closed tightly*, (43) nì-cì-di-ni- . . . -l-gò·ʔ *to have oneself kneeling*, (44) . . . -ɬ-ƙà·z *a thin even-surfaced object (e.g. a pane of glass) is in position*, (45) . . . -l-gę́·z *to be staring at (it)*, (46) . . . -l-gé·l *to be quiet, speechless*, (47) nà-ni- . . . -l-zàh *perpendicular objects (e.g. trees) lie scattered about*, (48) . . . -ɬ-zàs *seed-like objects are in position*, (49) . . . -ɬ-zí·ʔ *to be numb*, (50) O- . . . -ɬ-zį *to have (him) standing*, (51) . . . -ɬ-cò·z *a fabric-like object is in position*, (52) nà·-ná- . . . -d-ʒìž *to lie on one's side*, (53) . . . -ɬ-ʒò·l *to have (e.g. wool) lying in a heap.*

9. Active verb bases, as we have said, are always conjugated in seven paradigms: imperfective, perfective, progressive, future, customary, iterative, and optative. These differ in class-meaning somewhat as follows: imperfective, *action moving on toward fulfillment*; perfective, *action fulfilled*; progressive, *action going on (without reference to beginning or end)*; future, *action will take place*; customary, *action repeated by reason of habit or custom*; iterative, *action repeated over and over again*; optative, *would that action take place, let action take place.* Examples, taken from Navaho Texts,[5] follow.

Imperfective:

ʒìčàgò čìž ńʒì·lá·h *weeping* (4th p. reg. ipf. + -gò, subord. encl.) | *wood* | *she gathers it* (4th p. reg. ipf.). 18.2. xà?áťê·gòlá yìdą́ *how indeed* | *it is eaten* (3rd p. h- ipf.). 30.3. dà·šcà·h *I am sick* (lit. *I am dying*) (1st p. h- ipf.). 96.6. dìné ǹdà·h ?àsʒándó? ťá·bìké·-?dó· ǹdà·h *the man* | *he sits down* (3rd p. reg. ipf.) | *the woman also* | *right next to him* | *she sits down.* 313.2. ?á·dó· ?à?nì·ƙá·h *then* | *she begins to grind corn* (3rd p. h- ipf.). 286.2. nó·dà?í nìhìdàhàstì·n nìhìčą́·? ǹdèìłcè·d *the Utes* | *our husbands* | *from us* | *they are killing them* (3rd p. distrib. reg. ipf.). 438.3.

The second person imperfective is also used in commands and requests:

čìž ła? náhílá·h *wood* | *some* | *gather it!* (2nd p. reg. ipf.). 18.2. ?ákǫ́· díłɣè·d *over there* | *start to go!* (2nd p. reg. ipf.). 20.3. nóɣòžì? čéńłɣè·d *from here* | *go away!* (2nd p. n- ipf.) 26.3. kòdó· ńdà·h *right here* | *sit down!* (2nd p. reg. ipf.). 67.3. ?ákǫ́· šìdíłžì·d *over there* | *carry me!* (2nd p. reg. ipf.). 96.6. dò·dà nìyą́ *no!* | *eat it!* (2nd p. h- ipf.). 104.3. ƙàd ńdì·dá·h *now* | *you may get up.* (2nd. p. h- ipf.). 286.2.

Perfective:

dòìldìnę́· dà·zcą́·lá *the hateful one* | *he has really died* (3rd p. s- pf. + -lá, emphatic encl.). 20.2. ťá·?ácé nálɣòdígí· ťá·?àłcò yìdò·ɣį́·ł *first* | *he who has run back* (3rd p. n- pf. + -ígí· *he who*) | *all of it* | *he will eat it* (3rd p. fut.). 22.4. kʷe?íšį́· šìcói háníyá *here* | *my grandson* | *I have come for* (i.e. *to*

[5] Edward Sapir and Harry Hoijer, Navaho Texts (Iowa City: Linguistic Society of America, 1942). The numbers after each example refer to page and paragraph respectively.

fetch) *him* (1st p. n- pf.). 26.3. šánì·ltį *it* (*a baby*) *was put down* (i.e. *left there*) *for me* (3rd p. n- pf.). 38, line 2. ší ʔácé bà·níyá *I* | *first* | *I have come to it* (1st p. n- pf.). 38, line 1. k̀ád ǹk̀ídè·skài *now* | *they have left you* (3rd p. s- pf.). 46.4. xá·dę́·ʔ ńdì·lɣòd *from where* | *he has come running* (3rd p. n- pf.). 54.3. nà·dìn ná·xàidą́·ʔ ʔàtàhníyá *twenty*| *years have passed since* (3rd p. h- pf. + -dą́·ʔ *since*) | *I have come among* (*them*) (1st p. n- pf.). 434.4. bì·skání x̌òhnà·dą́·ʔą́· ʔàłcò dàʒ̨ì·sgì·ž *the next day* | *the wheat* | *all of it* | *they had finished cutting it* (4th p. distrib. s- pf.). 438.2.

Progressive:

mà?ì· ǯò·lʌ̀òš *Coyote* | *he was trotting along* (4th p. prog.). 20.1. ʔásà·ʔ yìł yìlɣòł *bucket* | *with it* | *he was running along* (3rd p. prog.). 20.2. šìbà? yílx́é·ł *ahead of me* | *you go trotting along* (2nd p. prog.). 22.4. xà?á́tį́·lá yìgá·ł *who indeed is it* | *he is coming along* (3rd. p. prog.). 50.7. čìl yì?òł *a plant* | *it came floating along* (3rd. p. prog.). 98.2. xá·?dę́·?lá ?ò·ldàhlá *from where* | *they were indeed going along* (3rd. p. prog. + -lá, emphatic encl.). 163.3. kǫ́· hòł ?ò·ldàh *here* | *with him* | *they were going along* (3rd p. prog.). 183.3.

Future:

łè·h ńdè·šbìš *in the ground* | *I shall bake you* (1st. p. fut.). 18.2. šà·ná·dí·dá·ł *you will come again to me* (2nd p. fut.). 18.6. ?ałɣàdìdì·tàš *we shall have a race* (1st p. du. fut.). 22.4. ǹcói nà·ńdè·šté·ł *your grandson* | *I shall return him to you* (1st p. fut.). 26.5. łà?dà náǹdìdò·łté·ł *one of them* | *he will pick you up* (i.e. *he will carry you off*) (3rd p. fut.). 40.1. dàdí·cà·ł *you will die* (2nd p. fut.). 72.7. dį̂·?ską́·gòlą̂· dàždò·cà·ł *in just four days* | *he will die* (4th p. fut.). 82.1. bìʒ̨́į́ kòdó· dàhdìdì·kàh *day* | *on that one* | *we shall start off* (1st p. du. fut.). 84.1.

Customary:[6]

yì?nì·k̀ąs *she customarily begins to massage her* (i.e. *the adolescent of the puberty rite*) (3rd. p. cust.). 286.1. yìká·?gó· ǹté·h *on it* | *she* (*the adolescent*) *customarily lies down* (3rd. p. cust.). 286.1. ɬá·?ákò dàhdì·lɣò? *at once* (i.e. *at this point in the ceremony*) | *she customarily begins to run* (3rd. p. cust.). 290.2. yónè?é ǹdɬ̂á·hgò kòdó· čé?àš *inside* (*the hogan*) | *when customarily the singing comes to a close* (3rd. p. cust. + -gò, subord. encl.) | *from there* (i.e. *from the hogan*) | *they two* (i.e. *the patients*) *customarily go out* (3rd. p. cust.). 298.1. yónè?é ?ałcò ǹtłš *inside* (*the hogan*) | *all of them* | *they are customarily blackened* (*with charcoal*) (3rd. p. cust.). 298.1. hàstì·n hàdì?á·h *an old man* | *he customarily starts to sing* (3rd. p. cust.). 296.3. nà·dą́·? dèiɣìš ?á·dó· dèilʌ̀à? *corn* | *they customarily pluck it* (3rd. p. distrib. cust.) | *and* | *they customarily husk it* (3rd. p. distrib. cust.). 404.2.

Iterative:

dàhń?dì·ldàh *they always* (*i.e. repeatedly*) *started off* (3rd. p. iter.). 175.3. šìɣàndì ša·nádá·h ńté·? *in my hogan* | *he came to me repeatedly* (3rd. p. iter.) | *it used to be.*[7] 319.3. ńléi ǯóhònà·?ái hànádáhígí· *there* | *the sun* | *where it rises again and again* (3rd. p. iter. + -ígí·, relative encl.). 331.2. This phrase, freely: *there where the sun constantly rises*, refers to the east. ɬá·?ałtàh ná?áldàh *just among each other* | *they constantly* (or: *repeatedly*) *went to visit* (3rd. p. iter.). 343.3. nà·kài ɬá·bìtàh ńdà?àldàh *Mexicans* | *even among them* | *they went often to visit* (3rd. p. distrib. iter.). 343.3. nà·niš náši?dìńì·hgò ǹnášniš *work* | *when from time to time I am offered it by someone* (1st. p. iter., agentive pass. [see §19] + -gò, subord. encl.) | *I work repeatedly here and there* (1st p. iter.). Freely: *I work here and there* (*at different jobs*) *whenever work is offered to me.* 436.3.

Optative:

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[6] All of the following examples are taken from texts describing various aspects of Navaho culture. In such texts, as might be expected, most of the active verbs are in the customary since the actions described are those characteristic of the cultural tradition. The English translations reflect this meaning only dimly.

[7] Note here the periphrastic indication of tense. Tense and modal particles like this one may be used with any of the forms of the seven conjugations.

k̄òs hólè? *clouds* | *let there be!* (3rd. p. opt.). 20.1. ǹ?dóžòł *let there be rain!* (3rd. p. opt.). 20.1. šił dó?è·ł *with me* | *let it begin to float!* (3rd. p. opt.). 20.1. šił čó·?è·ł *with me* | *let* (*the log*) *float out!* (3rd. p. opt.). 20.1. k"ì·šį· nà·dą́·? kìždólé·ł *here* | *corn* | *would that someone plant it* (4th. p. opt.). 29.2. šá?ódé·ł šè·nàhółtą́·? *may good things betide me* (3rd. p. opt.) | *may it rain for me* (3rd. p. opt.). 273.2.

10. As we have noted previously (IJAL 12, §§3, 6)., there are three imperfective paradigms (regular, n-, and h-) and three perfective paradigms (n-, h-, and s-). No active verb base is conjugated in all of these; a given verb base employs just one paradigm from each group in forming its imperfective and perfective conjugations. In terms of this criterion, then, active verb bases may be divided into the following five groups.

(1) Verb bases conjugated in the regular imperfective and the h- perfective (only the ipf. and pf. stems are cited): ha-?a- . . . -zero-?à·h, -?ą́ *the sun rises.* ná-di- . . . -zero-?è·ł, -?é·ł *to dissolve.* ní- . . . -ɬ-?į́, -?į́·? *to look at* (*it*). yá- . . . -ɬ-tì?, -tì? *to talk, converse.* nì-ʒi- . . . -ɬ-γà·ł, -γà·ł *to fall down, stumble.*

(2) Verb bases conjugated in the regular imperfective and the s- perfective: ná- . . . -zero-?àh, -?àh *butchering of an animal takes place.* di- . . . -zero-?à·h, -?ą́ *to begin to carry a round object.* nà-ni- . . . -ɬ-?ìn, -?į́·? *to keep* (*it*) *hidden.* di- . . . -zero-bà·ł, -bà·ł *to swing, hang* (*as from a trapeze*). ha-di- . . . -zero-bìn, -bį̀·d *to become full.*

(3) Verb bases conjugated in the n- imperfective and the n- perfective: nì- . . . -zero-?à·h, -?ą́ *to put a round object down.* čí- . . . -zero-?à·š, -?á·ž *two animate beings go out* (*e.g. of a house*). . . . -zero-?é·š, -?è·ž *to lead, guide* (*them*). nà- . . . -zero-bè·h, -bį́·? *to swim across* (*e.g. a river*). Oà·- . . . -ɬ-tè·h, -tį́ *to give an animate object to* (*him*). . . . -d-ɬá·h, -ɬà? *to come flying.* . . . -l-γè·d, -γòd *to come running.* ná- . . . -l-γè·d, -γòd *to run back home* (*back to one's starting point*).

(4) Verb bases conjugated in the h- imperfective and the h- perfective: . . . -ɬ-?á, -?à·d *to command* (*him*). ?a- . . . -zero-?á·d, -?àh *to throw a blanket-like object away.* dàh-di- . . . -zero-?à·š, -?á·ž *two animate beings start off.* . . . -zero-?à·ł, -?á·l *to chew* (*it*). yi- . . . -zero-bá·h, -bà? *to become gray.* nà- . . . -ɬ-dà·s, -dà·z (*e.g. sand*) *falls down, crumbles.* . . . -ɬ-dé·h, -dè·? *to clean, brush* (*it*) *off.* ni- . . . -zero-dó·h, -dòi *to become warm, hot.* . . . -zero-ɬò·d, -ɬó·d *to rub* (*it*) *off, wipe* (*it*) *clean.* . . . -zero-nɬ́·h, -nì·? *to find* (*it*) *out, get to know* (*it*).

(5) Verb bases conjugated in the h- imperfective and the s- perfective: nà- . . . -zero-?à·š, -?á·ž *two animate beings move about here and there.* ha- . . . -zero-?à·š, -?á·ž *two animate beings go up* (*e.g. a hill*). . . . -zero-bé·ž, bé·ž *to boil.* . . . -zero-bìž, -bìž *to braid* (*it*). ha- . . . -d-tìh, -tìh *to become old.* . . . -zero-ɬè·š -ɬé·ž *to blacken* (*it*). yi- . . . -zero-nìh, -nìh *to milk* (*e.g. a cow*). O-tà·- . . . -zero-nì·h, -nì·? *to distribute* (*it*) *among* (*them*). . . . -zero-γàz, -γàz *to scratch* (*it*).

Groups 1, 2, 4, and 5 illustrated in the preceding do not appear to differ in class meaning from one another. It is notable, however, that the bases in the groups which lack adverbial prefixes consistently take the h- imperfective; the regular imperfective occurs only in bases having one or more adverbial prefixes (see also IJAL 12.1, §3). It may also be noted that, though the regular and h- imperfective are both associated with the h- and s- perfective, n- imperfectives are consistently associated with n- perfectives alone. Further, bases which require both the n- imperfective and the n- perfective, appear in general to carry a completive connotation; the action is moving completively to an ending-point (see group 3).

Finally, in the bases possessing one or more adverbial prefixes, we may note that the choice of imperfective and perfective paradigms seems to be a function of the prefix complex. In short, a given adverbial prefix complex, regardless of the verb theme with which it is used, consistently requires

the same imperfective and perfective paradigms. This point is illustrated by the following examples (see also those previously cited):

ʔa- *off, away* (h- ipf., h- pf.): ʔa- . . . -zero-ʔà·h, -ʔą *to carry the round object away;* ʔa- . . . -zero-ʔà·š, -ʔá·ž *two animate beings go away;* ʔa- . . . -l-yè·d, -yòd *to run off, out of sight.*

di- *to begin to* (reg. ipf., s- pf.); di- . . . -zero-ʔà·h, -ʔą *to begin to carry a round object;* di- . . . -zero-ʔà·š, -ʔá·ž *two animate beings start to go;* di- . . . -l-yè·d, -yòd *to start to run.*

nà- *about, here and there* (h- ipf., s- pf.): nà- . . . -zero-ʔá, -ʔą *to carry a round object here and there,*[8] nà- . . . -zero-ʔà·š, -ʔá·ž *two animate beings go about here and there;* nà- . . . -l-yè·d, -yòd *to run here and there.*

na- *down* (h- ipf., h-pf.): na- . . . -zero-ʔà·h, -ʔą *to lift a round object down;* na- . . . -zero-ʔà·š, -ʔá·ž *two animate beings go down;* na- . . . -l-yè·d, -yòd *to run down.*

ha- *out* (*of an enclosed space*) (h- ipf., h-pf.): ha- . . . -zero-ʔà·h, -ʔą *to take a round object out* (*e.g. of a box*); ha- . . . -zero-ʔà·š, -ʔá·ž *two animate beings walk out;* ha- . . . -l-yè·d, -yòd *to slip out* (*e.g., a bone slips out of joint*).

ha- *moving up* (h- ipf., s- pf.): ha- . . . -zero-ʔà·h, -ʔą *to carry a round object up* (*e.g. up a hill*); ha- . . . -zero-ʔà·š, -ʔá·ž *two animate beings go up, ascend* (*e.g. a hill*); ha- . . . -l-yè·d, -yòd *to run up* (*e.g. a hill*).

11. The second criterion listed in §3, the presence or absence of a pronominal prefix in position 7 of the verb construction, divides all neuter and active verbs into two cross-cutting classes: intransitive and transitive. But whereas the distinction neuter vs. active is one that pertains to the verb base and theme, the difference intransitive vs. transitive can only be noted in the verb construction. Briefly, transitive verb bases are those whose constructions require a pronominal prefix in position 7, a prefix which is lacking in constructions belonging to intransitive verb bases.[9]

12. Active intransitive bases are easily distinguished in meaning from active transitives: in the former the actor performs an action or undergoes a process, while in the latter the actor performs an action upon a goal (symbolized by the pronominal prefix in position 7) or causes a goal to undergo a process. In the examples that follow third person imperfective constructions are cited in order better to illustrate the presence or absence of the pronominal prefix.

bį·h náʔàh *butchering of deer is going on* (bį·h *deer*): bį·h náiłʔàh (<ná-yi-ł-ʔàh)[10] *he butchers a deer.* hàʔàʔà·h *the sun rises* (lit. *a certain round object moves upward*); yà·yįʔà·h (<yi-à·-yi-ni-ʔà·h) *he gives a round object to him.* ńdìʔè·ł *it* (*e.g. salt*) *dissolves;* nâidìłʔè·ł (<ná-yi-di-ł-ʔè·ł) *he dissolves it, causes it to dissolve.* čò·ʔį, *it becomes useful;* čòyò·łʔį (<či-yi-yi-[*ɣʷe-]-ł-ʔį) *he makes use of it, causes it to become useful.* yì·bá·h *it becomes gray;* yìyì·łbá·h *he makes it gray, causes it to become gray.* nà·bą́·s *it rolls about here and there;* nàiłbą́·s (<nà-yi-ł-bą́·s) *he rolls it about here and there.* dìbà·ł *it swings, hangs* (*blanket-like*); yìdìłbà·ł *he hangs up a blanket-like object.* ʔádį·h *it disappears;* ʔí·łdį·h (<ʔá-yi-ł-dį·h) *he causes it to disappear, he destroys it.*

13. The class meaning of neuter intransitive bases is, roughly, *actor in state of being.* Neuter transitives, on the other hand, have the meaning *actor has* (*as attribute*) *goal in state of being.* This difference is clarified by

[8] The stems of this base differ from those in previously quoted examples having to do with the handling of a "round object." This problem of stem variation must be reserved for later discussion.

[9] In some constructions of a transitive verb base, those which have a third person object and a subject other than the third person, the pronominal prefix is zero. See IJAL 11.197, §7.

[10] For an explanation of the change in classifier, see §14.

the following examples, all of which are third person constructions.

nà·dą́·ʔ ʔí·ʔá *a stalk of corn stands erect* (nà·dą́·ʔ *corn* + ʔí·ʔá <ʔa-, indef. subject; yí-, third person h- pf.; -ʔá *a rigid object extends*); kà·ʔ yìkàl yìyí·ɬʔá *he is holding an arrow extended by its nock* (kà·ʔ *arrow;* yìkàl *its nock;* yìyí·ɬʔá <yi-, third person object pronoun; yí-, third person h- pf.; ɬ-, classifier; -ʔá *a rigid object extends*). Cf. also yìcò·ʔ hàyí·ɬʔá *he has his tongue extended as a rigid object, he is sticking his tongue out* (yìcò·ʔ *his tongue;* ha- *out from an enclosed space*). ǹdá·ʔ sí ʔą́ *the war-dance is going on* (ǹdá·ʔ *war-dance;* sí ʔą́ *a round object is in position*);[11] ǹdá·ʔ yìs ʔą́ (<yi-si-ɬ-ʔą́) *he has a war-dance going on, he holds a war-dance, he is responsible for a war-dance being given.* Cf. also nà·nìš sí ʔą́ *work is on hand, work is to be done* (nà·nìš *work*); nà·nìš yìs ʔą́ *he has work on hand, he has work to be done.* bìɣà·ʔ čò·ʔį́ (*sheep*) *their wool is useful* (bìɣà·ʔ *their wool*); nà·dą́·ʔ čídàyò·ɬʔį́ *they find corn useful, they are making use of corn* (nà·dą́·ʔ *corn* plus third person distrib.). sìdá *he is in a sitting position, he sits;* yìsdá (<yi-si-ɬ-dá) *he holds him in a sitting position, he has him sitting.* cìn sìtą́ *a log, stick is in position, lies* (cìn *log, stick*); cìn yìstą́ (<yi-si-ɬ-tą́) *he has a log or stick in position, he has a log lying.* ʔàɣʷé·ʔ sìtį́ *a baby lies* (*there*) (ʔàɣʷé·ʔ *baby*); ʔàɣʷé·ʔ yìstį́ (<yi-si-ɬ-tį́) *she has a baby lying* (*there*). sìzį́ *he is standing;* yì·sį́ (<yi-si-ɬ-zį́) *he keeps him standing, he has him standing.* sìʒò·l *wool, loose stuff is in position, lies;* yìsʒò·l (<yi-si-ɬ-ʒò·l) *he has wool, loose stuff lying.*

14. From the examples of transitive constructions given in §§12–13, it might be inferred that the ɬ classifier has the function of a transitivizer or of a causative prefix. But though it is unquestionable that many transitive constructions have ɬ classifiers, it does not follow that ɬ is clearly and unmistakably a transitivizing or causative prefix. This is shown by the fact that many intransitive verbs possess an ɬ classifier and that even more transitive verbs occur with a zero classifier. The following bases, quoted in their third person constructions, illustrate this point.

Neuter intransitives with ɬ classifier: sìɬkà·ž *a thin even-surfaced object* (*e.g. a pane of glass*) *is in position,* hà·ʔò·ɬkà·ɬ *the pelvic bone* (*on a woman*) *is protruding,* ʔàɬxòs *he is asleep,* sìsàs (<si-ɬ-zàs) *seed-like objects are in position,* sìsí·ʔ (<si-ɬ-zí·ʔ) *it is numb,* dìsǫ̀s (<di-ɬ-zǫ̀s) *it sparkles* (*like a diamond*), ńłcą́ *it is rainy,* sìɬcò·z *a fabric-like object is in position.*

Neuter transitives with zero classifier: yò·ʔį́ *he has him in view, he sees him,* yínítą̀ʔ *he has hold of it,* yìnì·h *he has knowledge of it, he knows it,* yìnízìn *he desires, wants it,* yìdì·čą̀ʔ *he has it in hearing, he hears it,* yóžì ʔ *he has a grip on him* (*with fingers*), yìlį̀·h *he has the taste of it, he tastes it.*

Active intransitives with ɬ classifiers: nà·ɬdà·s *it* (*e.g. sand, loose stuff*) *spills down slowly,* yáɬtì ʔ *he talks, converses,* hòdìɬtį̀·h *it begins to rain,* díńłná·h *he becomes tired,* ʔàdìɬkǫ́·h *he starts to swim away,* ǹʒìɬxà·ɬ *it falls down,* dìsá·ɬ (<di-ɬ-zá·ɬ) *it* (*e.g. a feather*) *begins to float through the air,* dìɬʒìd *it is spoiling, rotting,* nà ʔdìɬcį́·h *there is a slow drizzle of rain.*

Active transitives with zero classifier: ʔì·ʔá·d (<ʔa-yi-ʔá·d) *he throws a blanket-like object away,* yìdìʔà·h *he begins to carry a round object* (note: dìʔà·h *a round object begins to move*), yìʔà·ɬ *he chews it,* yìdìʔé·š *he begins to lead them* (*e.g. horses*), yìbìž *he braids it,* hàintá (<ha-yi-ni-tá) *he hunts for it,* dàhìdì·tį̀·h (<dàh-yi-dì·-tį̀·h) *he lifts up a long slender object,* yìtè·š *he blackens it, makes it black,* yítò·d *he wipes it clean,* yìyí·nìh *he milks it* (*e.g. a cow*), yìtàinì·h (<yi-tà·-yi-nì·h) *he distributes it among them,* yìní·h *he finds it out,* hàiní·š (<ha-yi-ní·š) *he pulls it* (*e.g. a weed*) *out,* nàinìl (<nà-yi-

[11] The "round object" category in Navaho includes a wide range of non-material things; it has become a kind of miscellaneous verb of handling. For a discussion of these verbs in Apachean, see IJAL 11.13–23.

nìl) *he scatters them about*, yìγą́ *he kills them*, yìγą́·d *he shakes it*, yìγàz *he scratches it*, nàiγé (<nà-yi-γé) *he carries a burden about*.

15. These examples make it clear that intransitive and transitive constructions occur with both the zero and the ɬ classifier. This is not the whole story, however. Though they are not very numerous, there are also intransitive constructions with the d and l classifiers and, rarely, transitive constructions with the l classifier.

Neuter intransitives with d or l classifier: nà·sbé·ž (<nà-si-d-bé·ž) *several objects lie spread out, scattered about*, ʔàdìldi·l *there is a distant noise*, dìlkǫ̀·h *it is smooth*, dò·lk̀ò·l *it (e.g. water) is wavy, rippled*, yìsγé·l (<yi-si-d-γé·l) *he is quiet, without speech*, nà·lzàh *hanging objects (e.g. icicles) are scattered about*, cìn nànè·szàh (<nà-ni-si-l-zàh) *trees are scattered here and there*.

Neuter transitives with l classifier: yìnò·lnìh *he resembles him*, yìsγę́·ž (<yi-si-l-γę́·ž) *he stares at it*.

Active intransitives with d or l classifier: ǹdá·h (<ni-d-dá·h) *they perform the war-dance*, nà·ldè·h *they move about here and there*, ʔàdì·ldɬ *a noise takes place in the distance*, náhìdì·tá·d (<ná-hi-dì·-d-tá·d) *he jumps up suddenly*, yì·ltɛ́·h *he runs, races*, hà·tìh (<ha-yi-d-tìh) *he gets old*, yɬàh (<yi-d-ɬàh) *he flies*, nà·ǹà? (<nà-yi-d-nà?) *he crawls about here and there*, nà·lnìš *he works*, dìlk̀òs *he coughs*, dìlk̀ò·ɬ *it (e.g. water) begins to get wavy*, nì·lγè·d *he stops running*.

Active transitives with l classifier: yìldè·ɬ *he eats them (e.g. berries) one at a time*, yó·lní·h *he suspects him of adultery*, yìlkè·d *he eats a round solid object (e.g. an apple)*, yìlγàɬ *he eats meat-like food*.

Intransitive and, to a lesser extent, transitive verbs are, then, found in all four verb classes, a fact which considerably obscures the function and meaning of the classifiers. It seems extremely probable that ɬ, d, and l are all historically composite morphemes; that, in other words, primitive Athapaskan had a far more complex system of classifying prefixes than is found in the Apachean languages today. In all probability the choice of classifier was in part at least governed by both adverbial and paradigmatic prefixes for, as we shall see in the next section, certain prefixes today appear to require the d and l classifiers in the Apachean languages.

16. Certain adverbial prefixes, notably ná·- or ná·ná- *again, also* and ná- *back (again)* and the paradigmatic prefixes ʔádi- (ʔád-, ʔá-), reflexive pronoun, and ʔàhi-, reciprocal pronoun, always require either a d or an l classifier in the constructions of which they form a part.[12] When these prefixes are added to a construction having the zero classifier, the zero becomes d, and when they are added to a construction having the ɬ classifier, the ɬ becomes l.

ná·nâiné·lʔį́·ʔ *he looked at him again* (third person pf., act. tr.; cf. yìné·lʔį́·ʔ *he looked at him*), ná·násdá (<ná·ná-si-d-dá) *he sits again* (third person neut. intr; cf. sìdá *he sits*), ná·nè·sdá (<ná·-ni-si-d-dá) *he took his seat again* (third person pf., act. intr.; cf. nè·zdá <ni-si-dá *he took his seat*), ǹná·nát̀à·š (<nà-ná·ná-d-ʔà·š) *they two again walk about here and there* (third person ipf., act. intr.; cf. nà·ʔà·š *they two walk about here and there*), nâidą́ (<ná·-yi-d-yą́) *he eats it also* (third person ipf., act. tr.; cf. yìyą́ *he eats it*).

nâiné·lʔį́·ʔ *he looked at it anew* (third person pf., act. tr.; cf. yìné·lʔį́·ʔ *he looked at it*), dàhńdì·t̀à·š (<dàh-ná-dì·-d-ʔà·š) *they two start to go back* (third person ipf., act. intr.; cf. dàhdì·ʔà·š *they two start to go*), náigé (<ná-yi-ni-d-γé) *he carries a burden back (home)* (third person ipf., act. tr.; cf. yíγé *he arrives with a burden*).

ʔákì·dɬ́á·d (<ʔá-k̀ì-yi-di-d-ʔá·d) *he throws a blanket off of himself, he uncovers himself* (ʔá-k̀ì- *from, off of oneself*, the reflexive pronoun plus a postposition; cf. yìkì·dìʔá·d *he throws a blanket-like object off of him, he un-*

[12] This is also true of the first person dual subject pronoun but this case has already been discussed and illustrated. See IJAL 11.199–201, §8f.

covers him. Both forms are third person ipf., act. tr.), ʔádò·ɬį́ (<ʔádì-yì-d-ʔį́) *he sees himself* (third person neut. tr.; cf. yò·ʔį́ *he sees him*), ʔádìné·lʔį́·ʔ *he looked at himself* (third person pf., act. tr.; cf. yìné·łʔį́·ʔ *he looked at him*), ʔádìldé·h *he cleans himself* (third person ipf., act. tr.; cf. yìłdé·h *he cleans him*), ʔádìką̀·s (<ʔádi-d-ką̀·s) *he stretches himself* (third person ipf., act. tr.; cf. yìką̀·s *he stretches it*), ʔádìlkǫ́·h *he hurts himself* (third person ipf., act. tr.; cf. yìłkǫ́·h *he hurts him*), ʔádà·yáǹʒìn (<ʔád-à·-yá-ní-d-zìn) *he is ashamed of himself* (third person neut. intr. with ʔád- as indirect obj.; cf. yà·yáǹzìn *he is ashamed of him*).

ʔàhò·ɬį́ (<ʔàhi-yì-d-ʔį́) *they two see each other* (third person neut. tr.; cf. yò·ʔį́ *he sees him*), ʔàhìné·lʔį́·ʔ *they two looked at each other* (third person pf., act. tr.; cf. yìné·lʔį́·ʔ *he looked at him*).

17. The clearest function of the d and l classifiers today is found in the formation of the passive. All passive constructions in the Apachean languages, whatever their subclass, possess either the d classifier (if derived from zero class transitives) or the l classifier (if derived from ɬ class transitives). There are, however, other markers of the passive category, and an examination of these leads to the following three sub-divisions:

(1) Simple passive constructions: no prefix in position 7; the goal is symbolized by the subject pronoun prefix (position 12).

(2) Agentive passive constructions: pronominal prefix in position 7 symbolizing the goal, the indefinite subject prefix ʔa- in position 8 symbolizing the agent, and a prefix di- of unknown meaning in position 9.

(3) Mediopassives: no prefix in position 7; the subject pronoun prefix (in position 8 or 12) symbolizes both actor and goal.

18. There are two types of simple passive: those derived from neuter transitives and those derived from active transitives. Neuter simple passives have the class meaning *state of being imposed upon actor*, whereas simple passives derived from active transitives denote *action performed upon actor*. Examples follow:

Neuter simple passives: kà·ʔ bìkàl yìlʔá *an arrow is held in extended position by its nock* (kà·ʔ *arrow;* bìkàl *its nock;* cf. kà·ʔ yìkàl yìyí·lʔá *he holds an arrow extended by its nock*), cìn ʔè·lʔá *a stick is held extending (upward)* (cìn *stick;* cf. cìn ʔàyí·łʔá *he holds a stick extending [upward]*). nà·dą́·ʔ čò·lʔį́ *corn is found useful* (nà·dą́·ʔ *corn;* cf. nà·dą́·ʔ čìdàyò·łʔį́ *they find corn useful*). yìɬį́ (<yi-d-ʔį́) *he is visible, he is held in view* (cf. yò·ʔį́ *he sees him, he has him in view*). nè·sʔį́·ʔ (<ni-si-l-ʔį́·ʔ) *it is kept hidden* (cf. yìnè·sʔį́·ʔ *he keeps it hidden*). díłzìn *it is held sacred* (cf. yìdísìn <yi-di-ni-ɬ-zìn *he holds it sacred*). ʔákó·lzìn *it is held in that way* (cf. ʔákʷíyósin <ʔá-kó-yi-ni-ɬ-zin *he holds it in that way*). dìlʒìd *it is kept in spoiled, rotten condition* (cf. yìdìlʒid *he has it in spoiled, rotten condition*).

Simple passives derived from active constructions (unless otherwise stated, ipf. forms are cited): yìlʔá *he is sent on an errand* (cf. yìłʔá *he sends him on an errand*).[13] ńdí·ʔè·ɬ *it is dissolved* (cf. nâidìłʔè·ɬ *he dissolves it* and ńdí·ʔè·ɬ *it is dissolving*). bížiʔ nàìłʔìn *their names are kept hidden* (bížiʔ *their names;* cf. nàìłʔìn *he keeps it hidden*). né·lʔį́·ʔ *it has been looked at* (pf.; cf. yìné·łʔį́·ʔ *he has looked at it*). yìsbìž (<yi-si-d-bìž) *it has been braided* (pf.; cf. yìzbìž <yi-si-bìž *he has braided it*). yìldé·h *it is being cleaned off* (cr. yìłdé·h *he cleans it off*).[13] yì·ńìh (<yi-yi-d-nìh) *she is being milked* (cf. yìyì·nìh *he milks her*). bìtà·ńì·h (<bi-tà·-yi-d-nì·h) *it is being distributed among them* (cf. yìtàìnì·h <yi-tà·-yi-nì·h *he distributes it among them*).[13] hà·ńí·š (<ha-yi-d-ní·š) *it is being pulled out* (cf. hàìní·š *he pulls it out*).[13]

[13] yi- in the passive construction represents the ipf. prefix of the so-called disjunct (h- ipf.) paradigm; (see IJAL 12.2, §4). yi- in the active tr. construction is of course the third person object pronoun (see IJAL, loc. cit. and 11.197, §7).

19. Agentive passives are also derived from both neuter and active constructions. Neuter agentive passives have the class meaning *state of being imposed upon actor by agent* and agentive passives derived from active transitives denote *action performed upon actor by agent.* Note also that where simple passives exist only in the third person, agentive passives are found for all persons. However, the actor in the case of agentive passives is denoted, not by a position 12 prefix (as in simple passives) but by a position 7 prefix. Thus, the neuter agentive passive base O-ʔa-di- . . . (prog.)-d-ʔį *to be visible to someone* is conjugated for person as follows: šiʔdò·tį *I am visible to someone;* nìʔdò·tį *you are visible to someone;* bìʔdò·tį *he is, they are visible to someone;* hàʔdò·tį *he (fourth person) is, they two (fourth person) are visible to someone;* nìhìʔdò·tį *we two, you two are visible to someone.*

Neuter agentive passive constructions (cited in the third person; examples in this category are rare): bìʔdì·sʔè·ž (<bi-ʔa-di-si-l-ʔè·ž) *he is considered as leader, guide by someone* (cf. yìsʔè·ž *he considers him leader, guide*). bìʔíndìsʔį·ʔ (<bi-ʔa-ni-di-si-l-ʔį·ʔ) *it is kept hidden by someone* (cf. yìnè·sʔį·ʔ *he keeps it hidden* and nè·sʔį·ʔ *it is kept hidden*). bìʔdìszį (<bi-ʔa-di-si-l-zį) *he is kept standing by someone* (cf. yì·sį <yi-si-ɬ-zį *he keeps him standing*).

Agentive passives derived from active constructions (unless otherwise noted, cited in the third person ipf.): bìʔdìtà·ɬ *it is being chewed by someone* (cf. yìʔà·ɬ *he chews it* and yìtà·ɬ *it is being chewed*). bìʔdìné·lʔį·ʔ *he has been looked at by someone* (pf.; cf. yìné·lʔį·ʔ *he has looked at him;* né·lʔį·ʔ *he has been looked at*). bìʔdìlbé·ž *it is being boiled by someone* (cf. yìɬbé·ž *he boils it*). bìʔdìldé·h *it is being cleaned off by someone* (cf. yìɬdé·h *he cleans it off*, yìldé·h *it is being cleaned off*). tábìʔdìsgìz *he was washed by someone* (pf.; cf. tánâizgìz *he has washed him;* the prefix ná- does not occur in the agentive passive). bìʔdì·lkàd *it has been sewed up by someone* (pf.; cf. náiskàd *he has sewn it;* the prefix ná- does not occur in the agentive passive). bìʔdè·ską́·z *it has been stretched out by someone* (pf.; cf. yìzką́·z *he has stretched it out*). nàbìʔdè·skè·ʔ *it has been whittled by someone* (pf.; cf. nàizkè·ʔ *he has whittled it*). bìʔdìdą́ (<bi-ʔa-di-d-yą́) *it is eaten by someone* (cf. yìyą́ *he eats it*). bìʔdìgą́ (<bi-ʔa-di-d-yą́) *they are killed by someone* (cf. yìɣą́ *he kills them*). bíʔdóží (<bi-ʔa-di-ni-d-žį́) *he is being named by someone* (cf. yóží <yi-ni-žį́ *he names him*). nábìʔdìɬlcìs *he is being whipped by someone* (cf. nâiɬlcìs *he whips him*).

20. Mediopassives, like the other two passive types, may be derived from both neuter and active transitives. For neuter mediopassives the class meaning is *actor has (as attribute) self in condition of being;* mediopassives derived from active transitives mean *actor performs action upon self.*

Mediopassives should not be confused in structure with transitive constructions having the reflexive prefix though it is not without interest that the reflexive prefix requires the d and l classifiers (see §16). Mediopassives, as we have said, have no prefix in position 7; both actor and goal are symbolized by the prefixes of positions 8 and 12. Like agentive passives, mediopassives are conjugated for person; thus, the neuter mediopassive base ní- . . . (s-pf.)-l-ʔą́ *to hold one's head in position* is conjugated as follows: sg. 1. nésʔą́, sg. 2. níníʔą́, sg. 3. nêˑsʔą́, sg. 4. žìnêˑsʔą́, du. 1. nêˑlʔą́, du. 2. sìnôˑɬʔą́.

Neuter mediopassive constructions (unless otherwise noted, cited in the third person): kìnàˑldá *she is menstruating for the first time* (lit. *she has herself sitting [in the house?]*; cf. yìsdá <yi-si-ɬ-dá *he has him sitting*). násdòh (<ná-si-l-dòh) *he has aching muscles, he has his own muscles in an aching condition.* dádêˑsn̈óˑd (<dá-dí-ní-si-d-nóˑd) *he holds his own lips closed.* ǹcìdêˑsgoʔ (<nì-cì-di-ni-si-l-gòʔ) *he is kneeling, he has himself in a kneeling position.* ɣʷólɣé *he is so-called, he has himself so-named.* nálʒìd *he is afraid, he has himself in a state of fear* (cf. bánáʒìd

there is fear of him). nà·násʒìž (<nà·-ná-si-d-ʒìž) *he is lying on his side.* sínłʒò·l *you are lying in a heap, you have yourself lying in a heap* (cf. sínłʒò·l *you have it* [*e.g. wool, loose stuff*] *lying in a heap*). yìlčòž *he has boils, he has himself afflicted with boils.*

Mediopassives derived from active transitives (third person ipf. forms are cited unless otherwise noted): dìldìz *he shakes, trembles.* ná·dǫ́·s (<ná-yi-d-dǫ́·s) *he whirls around* (*until dizzy*). nì·lté·h *he becomes balky, stubborn.* yì·hn̥tà·h (<yi-ì·h-ni-d-ʔà·h) *he puts his head into it* (*e.g. a mask*) (lit. *he puts his own round object into it;* cf. ǹyíʔà·h <nì-yi-ni-ʔà·h *he puts a round object down*). nàn̥tìn (<nà-ni-d-ʔìn) *he goes into hiding* (cf. nàiǹłʔìn *he keeps it hidden*). ǹʔdìlkàl *he plays shinny* (lit. *he knocks his own* [e.g. *ball*] *about;* cf. nàikàl *he knocks* [*e.g. a ball*] *about.* Note, however that the act. tr. has a zero classifier). ǹlkàh *he is getting fat* (cf. yìǹłkàh *he fattens him*). sòdìlzìn *he prays* (lit. *he blesses his own?*). náʔìʒí·ł (<náʔa-yi-d-zí·ł) *he becomes warm* (cf. the ł class act. tr. yìnì·sí·ł <yi-ni-yi-ł-zí·ł *he warms it*). čéníʒí·d (<čé-ni-d-zí·d) *he wakes up* (cf. the ł class act. tr. čéyìnísí·d <čé-yi-ni-ł-zí·d *he wakes him up*). dìlʒí·ł *he gives his strength.* ǹlʒò·ł *he falls in a heap, gets himself in a huddled position.* yì·čìd (<yi-yi-d-čìd) *he stoops over, gets himself in a stooped position.* dàhnà·lčą́·l *he swings suspended* (*e.g. on a rope*). nì·lčí·ł *he closes his own eyes* (cf. yìnì·łčí·ł *he closes his* [*another's*] *eyes*).

21. We may summarize the major form classes of the Apachean verb in tabular form as follows.

I. Neuter verbs: conjugated in only one paradigm and having only one stem; never conjugated for tense or mode. Class meaning: *state of being* (as opposed to *action*). Five sub-types may be distinguished: imperfective neuters, progressive neuters, n- perfective neuters, h- perfective neuters, and s- perfective neuters (see §§5–8).

A. Neuter intransitive: no prefix in position 7. May belong to any of the four classes but is most often of the zero class. Class meaning: *actor in state of being.*

B. Neuter transitive: required prefix in position 7. May belong to any of the four classes but is most often of the ł and zero class. Class meaning: *actor has* (*as attribute*) *goal in state of being.*

C. Neuter passive: required d or l classifier. Class meaning: *state of being imposed upon actor.*

1. Simple passive: no prefix in position 7, usually found only in the third person. Class meaning: *state of being imposed upon actor* (*no agent stated or implied*).
2. Agentive passive: indefinite deictic prefix in position 8 symbolizing agent; object pronoun prefix in position 7 symbolizing actor; required di- prefix in position 9, meaning unknown. Class meaning: *state of being imposed upon actor by agent.*
3. Mediopassive: conjugated in all persons, no prefix in position 7. Class meaning: *actor has* (*as attribute*) *self in state of being.*

II. Active and passive verbs: conjugated in the imperfective, perfective, progressive, future, customary, iterative, and optative (see §9). May have one or more distinctive stems. Class meaning: *action.*

A. Active intransitive: no prefix in position 7. May belong to any of the four classes but most often belongs to the zero class. Class meaning: *actor performs action.*

B. Active transitive: required prefix in position 7. May belong to any of the four classes but is most often of the ł and zero classes. Class meaning: *actor performs action upon goal.*

C. Passive: required d or l classifier. Class meaning: *action performed upon actor.*

1. Simple passive: no prefix in position 7, usually found only in the third person. Class meaning: *action performed upon actor (no agent stated or implied).*
2. Agentive passive: indefinite deictic prefix in position 8 symbolizing agent; object pronoun prefix in position 7 symbolizing actor; required di- prefix in position 9, meaning unknown. Class meaning: *action performed upon actor by agent.*
3. Mediopassive: conjugated in all persons, no prefix in position 7. Class meaning: *actor performs action upon self.*

A GUIDE TO SOURCE MATERIAL ON EXTINCT NORTH AMERICAN INDIAN LANGUAGES

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0. Scope
1. Abbreviations
2. Bibliography of extinct language families, languages, and dialects

0. This guide to source material is limited to printed works and manuscripts dealing with language families and individual languages no longer spoken. In a few cases material on extinct dialects of living languages has also been included. The scope is such to supplement the bibliography by Wolff[1], and together with it, designed to bring the Pilling bibliographies up to date. This differs from the Wolff bibliography in that it largely makes references directly to the ultimate sources; like the Wolff bibliography, however, references to other bibliographies are also included.

1. To make the references and annotations as brief as possible, certain abbreviations have been adopted:

(1) Voc = vocabularies or word lists. Subsequent numbers are estimates of the available words, e.g. [Voc 30] means thirty words of the language under consideration.

(2) Sg = songs. Numbers refer to lines, e.g. [Sg 6] denotes six lines of song text or texts. (The number of songs is not indicated, but instead, the total number of lines of one or more songs.)

(3) Bl Nar = biblical narratives, including translations of the Bible, sermons, and other Christian inspirational literature. Numbers indicate pages or fractions thereof, e.g. [Bl Nar 27], twenty-seven pages of material translated into the aboriginal language.

[1] Bibliography of Bibliographies of North American Indian Languages Still Spoken. IJAL 13.268–273 (1947).

(4) Fl Nar = folklore narratives, i.e. texts of folklore material. [Fl Nar 80], for example, indicates eighty pages of text.

(5) Nar = narrative texts, including all other cultural material. [Nar 50], for example, signifies fifty pages of text.

(6) Pdg = paradigms. Numbers refer to paradigmatic tables, e.g. [Pdg 6], six tables.

(7) Mor = morphemes: stems, affixes, and other bound forms. This designation should not be confused with vocabulary items mentioned above. [Mor 60], for example, denotes sixty forms.

The remaining abbreviations, namely (8), (9), (10) refer to various comparisons between two or more languages.

(8) Cor = close correspondences between the forms of languages obviously related (with the names of the languages concerned given in parentheses). Numbers specify the forms given, e.g. [Cor 30 (Mahican—Massachusett)] means thirty Mahican forms compared with a similar number of Massachusett forms.

(9) Sim = some similarity between the forms of languages possibly related (with the languages in question indicated), e.g. [Sim 40 (Beothuk—Algonquian)] denotes forty Beothuk forms compared with a like number of Algonquian forms.

(10) Conj = conjectured resemblances between the forms of languages where the similarities are not apparent (with the names of the languages under consideration specified), e.g. [Conj 20 (Beothuk—Malayo-Polynesian)] means twenty Beothuk forms compared with an equivalence of Malayo-Polynesian forms.

All numbers indicating quantity of the various genre given above are roughly

estimated. In counting the items, the average number per page has only been approximated.

Besides the qualified categories, I list, without stating the extent and without abbreviation, discussions of phonetics, morphology, linguistic affinities, and other matters bearing directly on the language.

In addition to the abbreviations of titles regularly employed in this journal, the following are also used throughout:

AAAS-P: American Association for the Advancement of Science. Proceedings.

APS-P: American Philosophical Society. Proceedings.

CNAE: U. S. Geographical and Geological Survey of the Rocky Mountain Region. Contributions to North American Ethnology.

FBC: Voegelin, C. F. and Harris, Z. S. Index to the Franz Boas Collection of Materials for American Linguistics. Language Monograph 22 (1945).

HAIL: Boas, F., ed. Handbook of American Indian Languages. Parts 1–2, BAE-B 40 (1911–1922). Part 3, New York (1933–1938).

HLAL-B: Hervas Laboratories of American Linguistics. Bulletin.

HSD-P: Historical Society of Delaware. Papers.

IAS-P: Indiana Academy of Science. Proceedings.

ICA-P: International Congress of Americanists. Proceedings.

KHS-T: Kansas State Historical Society. Transactions.

NYHA-P: New York State Historical Society. Proceedings.

OBA-R: Ontario Bureau of Archives. Report.

P-A1: Pilling, J. C. Bibliography of the Algonquian Languages. BAE-B 13 (1891).

P-A2: ——. Bibliography of the Athapascan Languages. BAE-B 14 (1892).

P-C: ——. Bibliography of the Chinookan Languages. BAE-B 15 (1893).

P-I: ——. Bibliography of the Iroquoian Languages. BAE-B 6 (1888).

P-M: ——. Bibliography of the Muskhogean Languages. BAE-B 9 (1889).

P-P: ——. Proof-sheets of a Bibliography of the Languages of the North American Indians. Washington (1885).

P-S: ——. Bibliography of the Siouan Languages. BAE-B 5 (1887).

PRS: Indiana Historical Society. Prehistory Research Series.

RLCP: Revue de Linguistique et de Philologie Comparée.

RSC-PT: Royal Society of Canada. Publications and Transactions.

SAP-J: Sociéte des Américanists de Paris. Journal.

SMC: Smithsonian Institution. Smithsonian Miscellaneous Collections.

UW-PA: University of Washington. Publications in Anthropology.

WAS-J: Washington Academy of Sciences. Journal.

2. Bibliography of extinct language families, languages and dialects. Names of documented language families appear alphabetically in capital letters; the remaining families are appended. Individual languages are listed under each family heading, with dialects connected by a hyphen (-). The names of extinct dialects precede those still spoken, the latter being indicated by italics. Materials which I have not examined are marked with an asterisk (*).

Overlapping with the monumental works of Pilling has been purposely avoided. But the number of items cited therein, whether word lists, texts, or complete articles on the language, in printed or manuscript form, is listed following my entries. In the same way, reference is made to the materials in the Franz Boas Collection. The Pilling bibliographies devoted to individual language families have superseded the Proofsheets where the Algonquian, Athabaskan, Eskimo, Chinookan, Iroquoian, Muskogean, Salishan, Siouan, and Wakashan languages are concerned. But the latter work still consti-

tutes the most complete guide to sources on other linguistic families up to 1885.

ALGONQUIAN

MOHEGAN - PEQUOT - MONTAUK - QUINNIPIAC-UNQWACHOG-NAUGATUCK

(1) Douglas-Lithgow, R. A. Dictionary of American Indian Place and Proper Names in New England. Salem (1909). 400 pp. [Bl Nar 1, Place names, Tribal names, Personal names]

(2) Prince, J. D. and Speck, F. G. Glossary of the Mohegan-Pequot Language. AA ns 6.18-45 (1904). [Phonetics, Voc 300, Cor 10 (Mohegan—Narragansett, Natick)]

(3) ——. The Modern Pequots and their Language. AA ns 5.193–212 (1903). [Phonetics, Bl Nar 3, Text analysis, Sg 2, Voc 200]

(4) Speck, F. G. A Modern Mohegan Pequot Text. AA ns 6.469–476 (1904). [Nar 1, Text analysis]

(5) ——. Native Tribes and Dialects of Connecticut. BAE-R 43.199–287 (1926). [Nar 12, Voc 120, Morphology, Mor 45, Personal names, Cor 22 (Mohegan-Pequot—Massachusett-Narragansett, Wabanaki]

(6) Townshend, C. H. The Quinnipiack Indians and their Reservation. New Haven (1900). 79 pp. [Personal names, Bl Nar 1]

Addendum: P-A1 77 publ., 4 mss.

MAHICAN-PENNACOOK

(7) Douglas-Lithgow, R. A. Same as (1) above. [Bl Nar 2, Place names, Tribal names, Personal names]

(8) Prince, J. D. A Tale in the Hudson River Indian Language. AA ns 7.74–84 (1905). [Nar 2, Text analysis]

(9) Ruttenber, E. M. Indian Geographical Names in the Valley of Hudson's River, the Valley of the Mohawk, and on the Delaware. NYHA-P 6 pt. 2.1–241 (1906). [Place names, Etymologies]

Addendum: P-A1 10 publ.

POWHATAN

(10) Gerard, W. R. Some Virginia Indian Words. AA ns 7.222–249 (1905). [Etymologies]

(11) ——. The Tapehanek Dialect of Virginia. AA ns 6.313–330 (1904). [Cor 35 (Tapehanek—Cree, Nipissing, Sauk, Shawnee, Kikapu, Lenape, Miami, Menomini, Ojibwa, Natick, Narragansett, Caniba, Penobscott, Abnaki)]

(12) ——. The Term Tomahawk. AA ns 10.277–280 (1908).

(13) ——. Virginia's Contributions to English. AA ns 9.87–112 (1907). [Etymologies]

(14) Michelson, T. The Linguistic Classification of Powhatan. AA ns 35.549 (1933). [Voc 20]

(15) Pollard, J. G. The Pamunkey Indians of Virginia. BAE-B 17.1–19 (1894). [Voc 100]

(16) Swanton, J. R. Newly Discovered Powhatan Bird Names. WAS-J 24.96–99 (1934). [Voc 15]

(17) Tooker, W. W. Derivation of the Name Powhatan. AA ns 6.464–468 (1904).

(18) ——. The Name Chickahominy. AA 8.257–263 (1895).

(19) ——. The Powhatan Name for Virginia. AA ns 8.23–27 (1906).

(20) ——. Some More about Virginia Names. AA ns 7.524–528 (1905). [Etymologies]

(21) ——. Some Powhatan Names. AA ns 6.670–694 (1904). [Cor 20 (Powhatan—Natick, Cree), Place names]

Addendum: P-A1 11 publ.

MASSACHUSETT-NAUSET-WAMPANOAG-COWESIT

(22) Douglas-Lithgow, R. A. Same as (1) above. [Bl Nar 1, Voc 130, Place names, Tribal names, Personal names]

(23) Gerard, W. R. See (11) above.

(24) Michelson, T. Preliminary Report on the Linguistic Classification of Algonquian Tribes. BAE-R 28.221-290 (1907). [Cor 115 (Natick—Cree, Menominee, Fox, Shawnee, Passamaquoddy, Abnaki, Ojibwa, Algonkin, Peoria, Delaware)]

(25) Prince, J. D. Last Living Echoes of the Natick. AA ns 9.493–498 (1907). [Voc 25]

(26) Speck, F. G. See (5) above.

(27) Trumbull, J. H. Natick Dictionary. BAE-B 25.1–349 (1903). [Natick-English and English-Natick]

(28) Tooker, W. W. See (21) above.

(29) Woodman, J. J. Indian Legends. Boston (1924). 268 pp. [Bl Nar 2]

Addendum: P-A1 144 publ., 6 mss.

NARRAGANSETT-NIANTIC

(30) Gerard, W. R. See (11) above.

(31) Prince, J. D. and Speck, F. G. See (2) above.

(32) Speck, F. G. See (5) above.

Addendum: P-A1 35 publ., 1 ms.

NANTICOKE-CONOY

(33) Brinton, D. G. A Vocabulary of the Nanticoke Dialect. APS-P 31.325–333 (1893). [Voc 300]

(34) Speck, F. G. The Nanticoke and Conoy Indians. HSD-P ns 1.1–77 (1927). [Voc 610, Personal names, Place names, Kinship terms]

Addendum: P-A1 12 publ.

MIAMI-WEA-PIANKESHAW-PEORIA-ILLINOIS

(35) Anonymous. Illinois and Miami Vocabulary and Lord's Prayer. U. S. Catholic Historical Magazine 3.1–9 (1891). [Voc 200, Pdg 1, Bl Nar 1]

(36) Dunn, C. Jacob Piatt Dunn: his Miami Language Studies and Indian Manuscript Collection. PRS 1.31–59 (1937). [List of the Dunn mss. in the Indiana State Library]

(37) Gerard, W. R. See (11) above.

(38) Michelson, T. See (24) above.

(39) Voegelin, C. F. Shawnee Stems and the Jacob P. Dunn Miami Dictionary. PRS 1.63–108, 135–167, 289–323, 345–406, 409–478 (1938–1940). [Voc 2400]

Addendum: P-A1 95 publ., 4 mss.

PAMLICO

(40) Pollard, J. G. Same as (15) above. [Voc 40]

Addendum: P-A1 14 publ.

Additional Algonquian languages: Nipmuck-Pocumtuck, Chowan.

ATAKAPA

(41) Gatschet, A. S. and Swanton, J. R. A Dictionary of the Atakapa Language. BAE-B 108.1–181 (1932). [Phonetics, Nar 12, Atakapa-English dictionary]

(42) Swadesh, M. Phonologic Formulas for Atakapa-Chitimacha. IJAL 12.113–132 (1946). [Phonetics, Voc 50, Sim 250 (Atakapa—Chitimacha)]

(43) Swanton, J. R. Linguistic Position of the Tribes of Southern Texas and Northeastern Mexico. AA ns 17.17–40 (1915). [Sim 130 (Atakapa—Tonkawa, Coahuilteco, Karankawa, Comecrudo, Cotoname)]

(44) ——. A Sketch of the Atakapa Language. IJAL 5.121–149 (1929). [Phonetics, Morphology, Voc 900, Mor 160, Nar 2, Notes on text.]

(45) ——. A Structural and Lexical Comparison of the Tunica, Chitimacha, and Atakapa Languages. BAE-B 68.1–58 (1919). [Phonetics, Grammatical categories, Syntax, Sim 400 (Atakapa—Tunica, Chitimacha)]

(46) Villiers du Terrage, M. de and Rivet, P. Les Indiens du Texas. SAP-J ns 11.403–442 (1919). [Voc 130, Sim 40 (Atakapa—Karankawa), Sim 70 (Atakapa—Karankawa, Tonkawa, Coahuilteco)]

Addendum: P-P 9 publ.

ATHABASKAN

NICOLA

(47) Boas, F. The Tinneh Tribe of Nicola Valley. British Association for the Advancement of Science. Report 65.551–555 (1895). [Voc 50]

(48) ——. Vocabulary of the Athapascan Tribe of Nicola Valley. IJAL 3.36–38

(1924). [Voc 60, Sim 40 (Nicola—Chilcotin, Nētcā'ut'in)]

OWILAPSH

(49) Boas, F. and Goddard, P. E. Vocabulary of an Athabaskan Dialect of the State of Washington. IJAL 3.39–45 (1924). [Voc 320]

EUCHRE CREEK - UPPER COQUILLE - UPPER UMPQUA

*(50) Langdon, B. D. and Jacobs, M. [Euchre Creek-Upper Coquille-Upper Umpqua Athabascan][2]

Addendum: P-A2 14 publ., 8 mss.

GALICE-APPLEGATE

*(51) Jacobs, M. [Galice-Applegate Athabaskan][2]

Addendum: P-A2 1 publ., 5 mss.

CHETCO

*(52) Langdon, B. D. [Chetco Athabaskan][2]

LASSIK-*Kato-Wailaki*

*(53) Goddard, P. E. [Lassik Texts][3]

CHILULA-WHILKUT-*Hupa*

(54) Goddard, P. E. Chilula Texts. UC-PAAE 10.289–379 (1914). [Phonetics, Nar 4, Fl Nar 54]

(55) ——. Notes on the Chilula Indians. UC-PAAE 10.265–288 (1914). [Place names]

* (56) ——. [Whilkut Texts][3]

NONGATL

* (57) Goddard, P. E. [Nongatl Texts][3]

Additional Athabaskan languages: Wishtena-tin.

[2] Ms. reported by M. Jacobs, Survey of Pacific Northwest Anthropological Research, 1930–1940. Pacific Northwest Quarterly 32.79–106 (1941).

[3] Ms. reported by P. E. Goddard, The Present Condition of our Knowledge of North American Languages. AA ns 16.555–601 (1914).

BEOTHUK

(58) Gatschet, A. S. The Beothuk Indians. APS-P 22.408–424 (1885), 23.411–432 (1886), 28.1–16 (1890). [Phonetics, Morphology, Voc 1140, Mor 20, Sim 25 (Beothuk—Algonquian)]

(59) Howley, J. P. The Beothucks or Red Indians. Cambridge (1915). 345 pp. [Linguistic affinity, Gatschet's three papers reprinted]

(60) Patterson, G. Beothuk Vocabularies. RSC-PT 10 pt. 2.19–32 (1892). [Voc 440, Sim 110 (Beothuk—Algonquian), Sg 2, Personal names, Conj 35 (Beothuk—Malayo-Polynesian)]

Addendum: P-P 8 publ.

CADDOAN

WACO-TAWAKONI-*Wichita*

P-P 15 publ.

CALUSA

(61) Swanton, J. R. Early History of the Creek Indians and their Neighbors. BAE-B 73.1–492 (1922). [Place names]

CHINOOK

LOWER CHINOOK

(62) Boas, F. Chinook. HAIL 1.559–678 (1911). [Phonetics, Morphology, Syntax, Voc 1240, Mor 700, Nar 4]

(63) ——. Chinook Texts. BAE-B 20.1–278 (1894). [Fl Nar 156, Nar 30]

(64) ——. Notes on the Chinook Language. AA 6.55–63 (1893). [Phonetics, Morphology, Voc 120, Mor 30, Pdg 2]

(65) ——. The Vocabulary of the Chinook Language. AA ns 6.118–147 (1904). [Morphology, Voc 640, Mor 600, Pdg 2]

(66) Frachtenberg, L. J. Comparative Studies in Takelman, Kalapuyan, and Chinookan Lexicography. IJAL 1.175–182 (1918). [Sim 20 (Lower Chinook—Kalapuya)]

(67) Sapir, E. A Chinookan Phonetic Law. IJAL 4.105–110 (1927). [Mor 20, Voc 50]

(68) Swanton, J. R. Morphology of the

Chinookan Verb. AA ns 2.199–237 (1900). [Phonetics, Voc 250, Morphology, Mor 170]

Addenda: P-C 19 publ., 9 mss.; FBC 5 mss.

CLACKAMAS-*Cascades-Multnomah-Wasco-Wishram* (UPPER CHINOOK)

* (69) Jacobs, M. [Clackamas Chinook][2]

Addenda: P-C 3 publ.; FBC 3 mss.

CHUMASH

(70) Caballeria y Collel (E. Burke, tr.). History of the City of Santa Barbara. Santa Barbara (1892). 111 pp. [Voc 80, Bl Nar 2, Morphology, Syntax]

* (71) Englehardt, Z. Santa Barbara Mission. San Francisco (1923). [Bl Nar]

(72) Harrington, J. P. A Tentative List of the Hispanized Chumashan Place-names of San Luis Obispo, Santa Barbara and Ventura County California. AA ns 13.725–728 (1911). [Place names]

(73) Kroeber, A. L. The Languages of the Coast of California South of San Francisco. UC-PAAE 2.28–80 (1904). [Phonetics, Morphology, Voc 340, Mor 35, Kinship terms, Sim 10 (Chumash—Salinan)]

(74) ——. The Chumash and Costanoan Languages. UC-PAAE 9.237–271 (1910). [Mor 10, Voc 420, Bl Nar 1, Sg 2]

Addendum: P-P 22 publ., 6 mss.

COSTANOAN

(75) Dixon, R. B. and Kroeber, A. L. Linguistic Families in California. UC-PAAE 16.47–118 (1919). [Sim 175 (Costanoan—Wintun, Maidu, Yokuts, Miwok), Phonetics, Mor 20]

(76) ——. Numerical Systems of the Languages of California. AA ns 9.663–690 (1907). [Voc 70]

(77) ——. New Linguistic Families in California. AA ns 15.647–655 (1913). [Voc 10, Mor 5]

(78) Gifford, E. W. California Kinship Terminologies. UC-PAAE 18.1–285 (1922). [Voc 80, Kinship terms]

(79) Kroeber, A. L. Same as (74) above. [Voc 500, Mor 30, Bl Nar 2, Fl Nar 3, Sim 50 (Costanoan—Miwok)]

(80) ——. Same as (73) above. [Phonetics, Morphology, Voc 150, Mor 30, Fl Nar 2, Syntax, Sim 10 (Costanoan—Esseln)]

(81) ——. Phonetic Constituents of the Native Languages of California. UC-PAAE 10.1–12 (1911). [Phonetics]

(82) Mason, J. A. The Mutsun Dialect of Costanoan. UC-PAAE 11.399–472 (1916). [Phonetics, Morphology, Mor 95, Voc 2200]

Addendum: P-P 44 publ., 3 mss.

CUSABO

(83) Swanton, J. R. Same as (61) above. [Voc 100, Place names, Personal names]

IROQUOIAN

CONESTOGA

(84) Hanna, C. A. The Wilderness Trail. New York (1911). Vol. 1 [Personal names]

HURON-*Wyandot*

* (85) Anonymous. Grammar of the Huron Language. OBA-R 15.725–777 (1920).

* (86) Potier, P. Elementa Grammaticae Huronicae. OBA-R 15.1–157 (1920).

* (87) ——. Extraits de l'Evangelé. OBA-R 15.457–688 (1920).

* (88) ——. Radices Huronicae. OBA-R 15.159–455 (1920).

* (89) Richardie, Frs. and Potier, P. Account Book of the Huron Mission at Detroit and Sandwich (1740–1751). OBA-R 15.689–724 (1920).

Addendum: P-I 45 publ., 12 mss.

NOTTAWAY

P-I 7 publ.

Additional Iroquoian languages: Erie, Meherrin, Tionontati.

KALAPUYA

ATFULATI-YAMHILL-AKUMUTE

(90) Jacobs, M. Kalapuya Texts. UW-PA 11.1–394 (1945). [Fl Nar 31, Nar 18]

Addenda: P-P 4 mss.; FBC 6 mss.

KARANKAWA

(91) Gatschet, A. S. The Karankawa Indians. Peabody Museum Papers 1 pt. 2.5–103 (1891). [Voc 510, Sg 6, Phonetics, Morphology, Syntax, Linguistic affinities, Sim 10 (Karankawa—Tonkawe), Sim 15 (Karankawa—Pakawa dialects)]

(92) ——. Die Karankawa-Indianer. Globus 49.123–125 (1886). [Voc 20]

(93) Swanton, J. R. Linguistic Material from the Tribes of Southern Texas and Northern Mexico. BAE-B 127.1–145 (1940). [Voc 400, Sim 100 (Karankawa—Coahuilteco, Comecrudo, Cotoname)]

(94) Villiers du Terrage, M. de and Rivet, P. Same as (46) above. [Voc 30, Sim 25 (Karankawa—Coahuilteco), Sim 15 (Karankawa—Atakapa), Sim 70 (Karankawa—Tonkawa, Coahuilteco, Atakapa)]

MOLALE

CAYUSE

* (95) Ray, V. F. and Jacobs, M. [Cayuse][2]

Addendum: P-P 6 publ., 2 mss.

MUSKOGEAN

APALACHI

(96) Gatschet, A. S. The Migration Legends of the Creeks. Philadelphia (1884). Vol. 1 [Sim 8 (Apalachi—Cha'hta, Chicasa, Alibamu, Koasati, Creek, Seminole, Hitchiti, Mikasuki)]

(97) Toomey, T. N. Analysis of a Text in the Apalachi Language. HLAL-B 6.1–8 (1918). [Phonetics, Morphology, Bl Nar 3, Sim 80 (Apalachi—Choctaw, Alibamu, Hitchiti, Maskoki)]

Addendum: P-M 2 publ., 1 ms.

TUSKEGEE-*Alabama-Koasati*

(98) Swanton, J. R. Same as (61) above. [Voc 10]

GUALE (?)

(99) Swanton, J. R. Same as (61) above. [Place names, Personal names]

Additional Muskogean languages: Yamasi, Sawokli

Possibly Muskogean languages: Houma, Bayagoula, Tangipahoa, Kinipisa, Washa, Chawasha, Acolapisa, Pascagula, Mobile, Pensacola, Pawokti, Chatot, Apalachicola, Taposa, Charchiuma, Ibitupa.

SALINAN

(100) Kroeber, A. L. Same as (73) above. [Morphology, Pdg 4, Voc 70, Mor 5, Sim 10 (Salinan—Chumash)]

(101) Mason, J. A. The Ethnology of the Salinan Indians. UC-PAAE 10.97–240 (1911). [Voc 270, Place names, Kinship terms, Sg 6]

(102) ——. The Language of the Salinan Indians. UC-PAAE 14.1–154 (1918). [Phonology, Morphology, Voc 3110, Mor 50, Fl Nar 56]

(103) Sapir, E. A Supplementary Note on Salinan and Washo. IJAL 2.68–72 (1921). [Voc 85, Mor 25]

Addendum: P-P 16 publ., 4 mss.

SIOUAN

OFO-BILOXI

(104) Holmer, N. M. An Ofo Phonetic Law. IJAL 13.1–8 (1947). [Voc 90]

(105) Dorsey, J. O. The Biloxi Indians of Louisiana. AAAS-P 42.267–287 (1893). [Phonetics, Cor 27 (Biloxi—Dakota, Ɂegiha, Hidatsa, Kansa, Osage, Tutelo, Tciwere, Winnebago), Kinship terms, Morphology, Pdg 2, Voc 55, Nar 1]

(106) Dorsey, J. O. and Swanton, J. R. A Dictionary of the Biloxi and Ofo Languages. BAE-B 47.1–340 (1912). [Phonetics, Fl Nar 71, Notes on texts, Biloxi-English dictionary, Biloxi phrases 1470, Ofo-English dictionary]

(107) Riggs, S. R. Dakota Grammar, Texts and Ethnology. CNAE 9.1–232 (1893). [Cor 30 (Biloxi—Dakota, Ɂegihas, Kwapa, Osage, Tciwere, Winnebago, Mandan, Hidatsa, Tutelo, Kansa)]

(108) Swanton, J. R. New Light on the

Early History of the Siouan Peoples. WAS-J 13.33–43 (1923). [Voc 100]

(109) ——. A New Siouan Dialect. Putnam Anniversary Volume. New York (1909) pp. 477–488. [Voc 30]

(110) Voegelin, C. F. Ofo-Biloxi Sound Correspondences. IAS-P 48.23–26 (1939). [Phonetics, Voc 110]

Addendum: FBC 1 ms.

KANSA-*Omaha-Ponca-Osage-Quapaw*

(111) Dorsey, J. O. See (105) above.

(112) Morehouse, G. P. History of the Kansa or Kaw Indians. KHS-T 10.327–368 (1907–1908). [Personal names, Place names]

(113) Riggs, S. R. See (107) above.

(114) Spencer, J. The Kaw or Kansa Indians. KHS-T 10.373–382 (1907–1908). [Sg 8]

Addendum: P-S 20 publ., 5 mss.

TUTELO

(115) Dorsey, J. O. See (105) above.

(116) Frachtenberg, L. J. Contributions to a Tutelo Vocabulary. AA ns 15.477–479 (1913). [Voc 70, Sg 5]

(117) Riggs, S. R. See (107) above.

(118) Sapir, E. A Tutelo Vocabulary. AA ns 15.295–297 (1913). [Voc 60, Phonetics]

(119) Speck, F. G. and Schaeffer, C. E. Catawba Kinship and Social Organization with a Resume of Tutelo Kinship Terms. AA ns 44.555–575 (1942). [Kinship terms]

Addendum: P-S 4 publ., 1 ms.

MISSOURI-*Iowa-Oto*

P-S 10 publ., 1 ms.

WOCCON

(120) Lawson, J. Lawson's History of North Carolina. Richmond (1937). 259 pp. [Voc 110]

Addendum: P-P 14 publ.

Additional Siouan languages: Sewee, Santee, Pedee, Congaree, Wateree, Cape Fear, Coree, Sara, Saponi, Eno, Occaneechi, Monetan, Monacan, Manahoac.

TAENSA

(121) Swanton, J. R. The Language of the Taensa. AA ns 10.24–32 (1908). [Critical review of previously printed material, Linguistic affinities]

TANOAN

PECOS-*Jemez*

(122) Hewett, E. L. Studies on the Extinct Pueblo of Pecos. AA ns 6.426–439 (1904). [Clan names, Personal names]

(123) Hodge, F. W. Pueblo Indian Clans. AA 9.345–352 (1896). [Clan names]

Addendum: P-P 2 publ.

TIMUCUA

(124) Gatschet, A. S. and La Grasserie, R. de. Textes Timucua. RLPC 22.320–346 (1889). [Voc 20, Bl Nar 23]

(125) La Grasserie, R. de. Esquisse d'une Grammaire du Timucua, Langue de la Floride. Orléans, n. d. 44 pp. [Phonetics, Mor 25, Morphology, Voc 450, Pdg 18]

(126) ——. Textes Analysés et Vocabulaire de la Langue Timucua. ICA-P 7th Session, 1888. 403–437 (1890). [Bl Nar 6, Voc 1000]

(127) ——. Vocabulaire Timucua. Orléans (1892). 16 pp. [Voc 960]

(128) Pareja, F. Arte de la Lengua Timuquana. Paris (1886). 129 pp. [Phonetics, Bl Nar 4, Morphology, Pdg 57, Voc 2300]

(129) Swanton, J. R. Terms of Relationship in Timucua. Holmes Anniversary Volume. Washington (1916). pp. 451–463. [Voc 170]

(130) ——. Same as (61) above. [Place names, Personal names, Voc 500, Kinship terms]

(131) ——. The Tawasha Language. AA ns 31.435–453 (1929). [Sim 50 (Timucua—Tawasha, Muskhogean), Sim 15 (Timucua—Muskhogean)]

(132) Vinson, M. Sur la Langue Timucua. ICA-P 5th Session, 1884. 362–365

(1885). [Character of the language, Criticism of Pareja's work]

Addendum: P-P 22 publ.

UTO-AZTECAN

GABRIELENO

(133) Gifford, E. W. Same as (78) above. [Voc 20, Kinship terms]

(134) Kroeber, A. L. Notes on Shoshonean Dialects of Southern California. UC-PAAE 8.235–269 (1908). [Voc 80, Mor 10]

(135) ——. Shoshonean Dialects of California. UC-PAAE 4.65–166 (1907). [Voc 240, Place names]

(136) Reid, H. Account of the Indians of Los Angeles County. Essex Institute Bulletin 17.1–33 (1885). [Voc 60, Place names, Pdg 3, Sg 2]

(137) Roberts, H. H. Form in Primitive Music. New York (1933). [Sg 58]

(138) Woodward, A. Gabrieleno Indian Language. Masterkey 18.145–150 (1944). [Voc 150, Pdg 2]

Addendum: P-P 25 publ.

JUANENO

(139) Boscana, G. Chinigchinich. New ed. Santa Ana (1933). 246 pp. [Voc 40, Sg 5, Phonetics, Tribal names]

(140) Gifford, E. W. Same as (78) above. [Voc 10]

(141) Harrington, J. P. A New Original Version of Boscana's Historical Account of the San Juan Capistrano Indians. SMC 92 pt. 4.1–62 (1934). [Voc 10]

(142) Kroeber, A. L. Same as (134) above. [Voc 175, Mor 10]

(143) ——. Same as (135) above. [Voc 10]

Addendum: P-P 20 publ.

YANA

(144) Dixon, R. B. and Kroeber, A. L. The Native Languages of California. AA ns 5.1–26 (1903). [Voc 20]

(145) ——. Same as (76) above. [Voc 20]

(146) Gifford, E. W. Notes on Central Pomo and Northern Yana Society. AA ns 30.675–684 (1928). [Chieftainship terms]

(147) Kroeber, A. L. Same as (81) above. [Phonetics]

(148) Sapir, E. The Fundamental Elements of Northern Yana. UC-PAAE 13.215–234 (1922). [Mor 600, Pdg 4, Voc 20]

* (149) ——. Male and Female Forms of Speech in Yana. Donum Natalicium Schrijnen. Nijmegen-Utrecht (1929). pp. 79–85.

(150) ——. The Position of Yana in the Hokan Stock. UC-PAAE 13.1–34 (1917). [Sim 185 (Yana—Karok, Shasta-Achomawi, Chimariko, Chumashi, Yuman, Chontal)]

(151) ——. Terms of Relationship and the Levirate. AA ns 18.327–337 (1916). [Voc 50]

(152) ——. Text Analyses of Three Yana Dialects. UC-PAAE 20.263–294 (1923). [Fl Nar 5, Mor 500]

(153) ——. Yana Texts. UC-PAAE 9.1–235 (1910). [Phonetics, Fl Nar 122, Nar 2]

(154) ——. Yana Terms of Relationship. UC-PAAE 13.153–173 (1918). [Voc 95]

Addendum: P-P 2 publ., 1 ms.

Additional language families: AVOYELLES, EDISTO, STONO, YAQUINA.

REVIEWS

A NOTE ON 'STRUCTURE' [Review of de Goeje. By W. D. Preston. International Journal of American Linguistics 14.132–4 (1948).]

In the course of his critical review, Preston makes the following assertion: 'Structure is a series of statements. The structure of a given language or language corpus does not exist until it is stated.' At first reading, this statement is ridiculous. Upon deeper consideration, taken in conjunction with the statements which follow it in Preston's discussion, it is not ridiculous; yet it begs a question of fundamental importance, or, perhaps better, implies an answer to that question which seems to me to be misleading.

Linguistics—specifically, descriptive or structural linguistics—can be regarded as a game or as a science. As a game, the necessary equipment is a body of utterances from some language or dialect, or, indeed, a body of pseudo-utterances coined by a nimble mind for the purpose (as Nida, who does not take linguistics to be a game, makes up Papawapam problems for the training of his students). The rules of the game are any rules you prefer, with one limitation. The object of the game is to compare and analyze the utterances of the corpus and arrive at a redescription of them as composed of smaller recurrent (or occasionally non-recurrent) parts. The limitation on rules—that is, the one rule that all devotees of the game agree on pretty well—is that all the utterances of the corpus must be taken into account; as a matter of fact, even on this some players like to hedge, as when it is considered desirable to remove recent loanwords before describing phonology.

As a game, it matters not a whit what relation there may exist between the 'structure' produced by the player as he manipulates his toy, and anything that a native speaker of the language might say, either in or about his language, save for those very utterances of his which comprise the corpus.

No one can quarrel with games as games. In this particular case, extensive experimentation with the game, as a game, can be of use over and above its entertainment value, precisely as the proliferation of pure mathematics, which is in essence a game, is of tremendously great value for the 'practical' application of mathematics in physics, biology, and perhaps someday in social science. This practical value, however, is not susceptible of being described unless we stand away from game-linguistics and consider the science of the same name, as a science. This Preston does not do; I hope there is no injustice involved in stating that he seems almost to reject such a consideration as irrelevant.

The task of the structural linguist, as a scientist, is, as Preston implies, essentially one of classification. The purpose, however, is not simply to account for all the utterances which comprise his corpus at a given time; a simple alphabetical list would do that. Rather, the analysis of the linguistic SCIENTIST is to be of such a nature that the linguist can account also for utterances which are NOT in his corpus at a given time. That is, as a result of his examination he must be able to predict what OTHER utterances the speakers of the language might produce, and, ideally, the circumstances under which those other utterances might be produced.[1]

The analytical process thus parallels what goes on in the nervous system of a language learner, particularly, perhaps, that of a child learning his first language. The child hears,

[1] Attempts to include prediction of the circumstances (except in terms of preceding utterances) constitute semantic analysis. Structural analysis can be scientific without being semantic.

and eventually produces, various whole utterances. Sooner or later, the child produces utterances he has not previously heard from someone else. At first these newly coined utterances may be rejected by those about him; but by a process of trial and error, supplemented by the constant acquisition of new whole utterances from those who already speak the language, the child eventually reaches the point of no longer making 'mistakes'. LAPSES there may still be—that is, utterances which the speaker himself, sometimes, follows by remarks of the general nature of 'Oh, I meant to say such-and-such,' or else by simple partial repetition with the lapse eliminated. But by the time the child has achieved linguistic adulthood, his speech no longer contains ERRORS; for he has become an authority on the language, a person whose ways of speaking DETERMINE what is and what is not an error.

The child's coining of an utterance he has not heard is, of course, a kind of prediction: 'If I make such-and-such noises, those about me will react in a certain way.' (We do not imply that any such 'thought' passes through the 'mind' of the child.) The parallel between this and the process of analysis performed by the linguist is close. When the child is just beginning, his coinage of utterances is often ineffective; when the linguist's corpus is small, his predictions are inaccurate. As the child continues to learn, or as the corpus grows and analysis is modified, prediction becomes more and more accurate. In theory, at least, with a large enough corpus there would no longer be any discernible discrepancy between utterances the linguist predicted and those sooner or later observed.

The essential difference between the process in the child and the procedure of the linguist is this: the linguist has to make his analysis overtly, in communicable form, in the shape of a set of statements which can be understood by any properly trained person, who in turn can predict utterances not yet observed with the same degree of accuracy as can the original analyst. The child's 'analysis' consists, on the other hand, of a mass of varying synaptic potentials in his central nervous system.[2] The child in time comes to BEHAVE the language; the linguist must come to STATE it.

The player of linguistics as a game has no criterion by which to judge the relative merits of one analysis versus another. This gives him a freedom for experimentation which is valuable—but not for any reason, as we have said, statable within the economy of the game as a game. The worker in linguistics as a science (and he may be wrapped in the same skin as the game addict) has such a criterion: accuracy of prediction beyond one's corpus, and communicability of the basis for such prediction to others.

In the light of the above discussion, the relevance and the absurdity of Preston's statement quoted in the first paragraph are both clear. The structure of a language may be regarded as the end-product of a game; in this sense structure is created by the person who plays the game. But every speaker of a language plays just such a game, the end-product being a state of affairs in his nervous system rather than a set of statements. The linguistic scientist must regard the structure of a language as consisting precisely of this state of affairs. His purpose in analyzing a language is not to create structure, but to determine the structure actually created by the speakers of the language. For the scientist, then, 'linguistic structure' refers to something existing quite independently of the activities of the an-

[2] Preston might reject reference to the nervous system of a speaker as he rejects de Goeje's reference to the 'mind' of the speaker. For our purpose predictability is the factor of importance; it would not matter whether the internal state which correlates with speech were in the central nervous system, the soul, or the small intestine. But when we speak as scientists, we have the right and duty to accept the findings of other fields of science: psychology refers such matters to the nervous system, not to any other physical or non-physical component of a human being.

alyst: a language is what it is, it has the structure it has, whether studied and analyzed by a linguist or not.

There is no reason why we should not use the term 'structure' in both of the senses just given. They can be kept apart when necessary; in most linguistic discussions one is apt to be referring to both senses at the same time anyway. What does need to be avoided is useless argument as to whether linguistic structure is 'objective' or 'subjective', or the like; the purpose of this note is to help ward off such time-wasting discussion.

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A GRAMMAR OF THE WEST GREENLAND LANGUAGE. By Schultz-Lorentzen. Meddelelser om Grønland 129:3. C. A. Reitzels Forlag, Copenhagen, 1945. 104 pp. Kr. 5.00.

1.0. Schultz-Lorentzen states that his Eskimo grammar is: "... intended for the use of teachers ... based on a concise grammar in the Greenlandic language for the teaching of Greenlanders in Greenlandish schools (printed in 1904, reprinted in 1929), rewritten in Danish (1930) for the instruction of Danes at the Greenlandish Training College in Copenhagen"[1], based on the works of Kleinschmidt and Thalbitzer[2] and on the author's "observations made during many years' intercourse with Greenlanders and during my work as a teacher of the language both in Greenland and in Denmark." He notes an especial debt to Thalbitzer, particularly relative to the phonological treatment and to problems associated with the English edition. The translation was made by Annie I. Fausbøll. The grammar is contained under the following major sections: I. Sound and writing; II. Word construction; III. Stem Words and their Endings; IV. Noun Forms; V. Verb Forms; VI. Affixes; VII. The Joining of Words. A short bibliography is included. The terminology of the grammar represents mixed statement criteria (see **1.1–2** below), and a paradigmatic convention is followed.

1.1. Schultz-Lorentzen's statements. 1. "In the Greenlandic language the word has quite a different, much more dominant significance than it has in the language group familiar to us. Of course the Greenlanders employ a sequence of words in their talk, but these sequences can only improperly be called sentences. Apart from some few instances it may be said that the Greenlandic word contains in itself all the elements necessary to convey a completed meaning, thus both noun and verb, both subject and object, where such are necessary." (p. 13); 2. "Hence the Greenlandic word is the chief object to consider if we would understand the Greenlandic language. It is the word with which the grammar principally deals. And the word must not be regarded as a finished unit ready to be placed in and again fetched out of a dictionary. The Greenlandic word is living, is constantly coming into existence, so to speak constantly in course of construction. Starting from a fixed point of departure, the stem, it is amplified more and more by additions of various kinds, as the meaning may require, until everything has been said that can and should be said by it, and a short accented syllable so to speak puts a stop to it." (p. 14); 3. "The shortest form in which a stem can be mentioned so as to make sense is the stem word." (p. 14); 4. [on nouns and verbs] "This would seem to show clearly that the Greenlandic mind draws no decisive distinction between the two word classes, but ex-

[1] Schultz-Lorentzen, Kalâtdlit oqausînik oqausileríssutit, Godthaab, 1904; Det vestgrønlandske Sprog i grammatisk Fremstilling, Copenhagen, 1930.

[2] Especially: W. Thalbitzer, Eskimo, Washington, 1911; S. Kleinschmidt, Grammatik der grönländischen Sprache, Berlin, 1851. See M. Swadesh's restatement in LSNA pp. 30–54, and Z. Harris's restatement of Swadesh: IJAL 13.47–55 (1947).

presses itself by means of a single class, corresponding approximately to what we call nouns." (p. 17); 5. "It is likewise due to the concrete character of the Greenlandic language that the personal ending is used even where, for instance, the simple basic form would suffice in another language." (p. 27); 6. "In spite of the wear to which these personal endings have been subjected and which has worn down the original form till they often are unrecognizable, . . ." (p. 28); 7. "In a word compounded with several affixes the order in which these succeed each other denotes the place of the affix in the meaning of the word. The word is built up, as it were, as it gradually comes into existence, in such a way that each fresh suffix gives it an additional meaning." (p. 90); 8. "Most affixes can be added to all stem words within the limitation indicated by their meaning, and they may be added to each other within the same limitation. They are called *free* affixes." (p. 90); 9. "As an aid to the understanding of such a compounded word we may lay down the rule that the word is to be translated backwards, since an English sentence naturally begins with that personal affix with which the Greenlandic word ends, and the affixes thereupon occur to the mind in the reverse order." (p. 90); 10. "The affixes fall into several groups according to their meaning, though many of them have a meaning which is often untranslatable, or at any rate requires a long explanation; such therefore have not been included here." (p. 91); 11. "But many verbs have such a decidedly transitive meaning that they cannot do without an object." (p. 93); 12. "If it is desired to retain the transitive meaning of the verb, but there is reason to prefer an intransitive form of it, the socalled *semi-transitive* affixes are used, that is to say intransitive suffixes, which are added to the transitive verbs and give these an intransitive form without changing their meaning." (p. 93); 13. "The reason why semi-transitive affixes are used is the wish for a simpler construction of the word. A pure verb form with personal endings denoting both subject and object, and with both these added as special words, may make the context very involved, both formally and actually. A change of the verb-like words to noun-like ones will considerably simplify the composition and the understanding. And the semi-transitive affixes will contribute towards this." (p. 94); 14. "It has been said above that this change of the verb from transitive to intransitive occurs without any change taking place in the meaning of the word. It should be noted here, however, that the semi-transitive affixes impart to the word a certain indefinite character." (p. 94); 15. "When several words are joined together to form a context corresponding to what we call a sentence, the words are not as in our language welded together to form one unit, but must rather be said to be coordinate, each single word—except the relative form—having its own independent and quite complete (finished) meaning so that it can be understood by itself. Therefore the joining together of several words in reality only means a completement, an amplification, an explanation of the single word." (p. 95–6).

1.2. Comment on statements. The statements in **1.1** may be classified for the reference-frames: semantic (3, 7, 8, 10, 11, 12, 14); comparative (5); psychological (4, 13); historical (6); semantic-comparative (1, 15); semantic-psychological (2); comparative-psychological (9). There is no appreciable further development of these frames from the point of view of definition and overt acknowledgment of the logical bases of statement types. The concealed rationale would be the familiar reliance on traditional acceptance of recognized categories within a field of study.[3]

[3] A similar orientation seems to be suggested by Velten: "Ten years ago, linguists used to argue about the reality of phonemes. But surely, nowadays everybody is agreed that they are just as real as is any social institution." (Review of Pike's Phonetics, IJAL 11.185, fn. [1945].)

2.0. Schultz-Lorentzen and restatements. The Schultz-Lorentzen grammar may be regarded as a linguistic restatement. This is so because it relies on earlier publications, and statements not made by the author (**1.0**). Linguistic restatements may be defined as statements based on statements. The corpora to which the original statements bear relationship are handled in restatement only through the medium of the original statements. Thus a linguistic statement based on someone's (not the author's) raw materials would be not a restatement, but a primary statement relative to a specified variety of data. It makes no difference at this point what the purpose of the restatement may be. A crucial stricture is the independence of restatements from new data. New data or data from multiple sources may be introduced into the restatement framework, but it is not essential to the nature of the restatement operation. In this way a judgment on linguistic procedures according to the use of "primary" or "secondary" data here becomes a matter of provisional interest.

Restatements may, then, be undertaken for diverse purposes: 1. pedagogical, with arrangements of material and statements according to set norms for the transmission and reception of information; 2. structural, with arrangements according to set criteria of logical organization; 3. cultural, with arrangements according to cultural expectation, fashions and fads in language description. Schultz-Lorentzen's exposition may be specifically related to 1. for immediate purposes, but the coverage of 3. might also be said to include it. Schultz-Lorentzen's grammar, then, is a restatement designed for a pedagogical purpose, and may be judged exclusively as such. Elements of it which might, out of context, be taken as structural are now by definition not so, since structure (itself the result of a structural purpose) is defined as culturally non-purposive and non-utilitarian in contrast to the purposiveness of pedagogy (the result of a pedagogical purpose).[4]

2.1. Pedagogical restatements. Without independent pedagogical techniques based on the free scientific investigation of teaching situations, pedagogical restatements may be expected to rely heavily on cultural stereotypes, solidified tradition, etc. Grammars which express a didactic purpose are usually composed in such a way as to be intelligible to a body of readers whose previous conditioning in knowledge and learning habits is similar in certain respects. Thus a modern pedagogical grammar of German written in Hungarian might present its materials under categories and arrangements which would be conditionedly recognized by a body of readers representing at least the literate Western world. Such a grammar could be translated easily into any language whatever spoken by any of the readers addressed. Historically and geographically this may be laid partly to the spreading influence of Western Scholasticism. Supposing a different tradition and influence for e.g. India, such an easy translation would not be possible. A new sort of conditioning in the reference systems which support learning would need to be undergone. This represents a cultural limitation on the structure of pedagogical grammars. The same limitation would obviously apply to structural grammars which are employed for teaching purposes, and to grammars which propose novel teaching methods.[5] The translation of language data from one culture to another on any level implies an imitative function, with the receiving culture establishing the norms. Thus, phonetically, new sounds are imitated by means of similarity and contrast

[4] Thus two levels of purpose: the author's (in determining the nature of his task), and the further purposiveness defined by his statement of the task.

[5] C. F. Voegelin and Z. S. Harris, The Scope of Linguistics, AA 49.595 (1947): see "Applied linguistics. . .".

referents which are dependent on the receiving language. Students are often advised to try for the x as in German ach, the ɩ as in English thin, etc., with exact mimicking of the adumbrated sounds recommended when contact with speakers is made. Morphological and syntactic learning would have similar inter-cultural reference sets. Schultz-Lorentzen's statement 9. (**1.1**) implies a one-to-one meaning-unit transference from Eskimo to English, a necessary feature of some translation processes, but not of speaking Eskimo.

Schultz-Lorentzen's grammar would appear to tolerate judgment only on its pedagogical qualities, and thereby on the ease or difficulty of cultural recognition of its categories and references. It would be inappropriate to tax the author with failing to produce something new in educational methods or with failing to adopt certain structural procedures.

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ANTHROPOLOGY: RACE, LANGUAGE, CULTURE, PSYCHOLOGY, PREHISTORY. By A. L. Kroeber. Harcourt, Brace and Company, N. Y., 1948. New Edition, pp. xii, 856, xxxix. $7.50.

This is not a formal review; it is a note comparing, in four respects, Bloomfield's book, Language, and Kroeber's book, the 1948 Anthropology.

In 1914, Leonard Bloomfield published his prolegomenon (An Introduction to the Study of Language); in 1933, he published his definitive work (Language). In the score of years between the two publications the decisive activity on the part of the author, the activity which resulted in the crucial difference between the 1914 book and the 1933 book, was his critical reading of linguistic structures of (particularly unwritten) languages of the world, and his own specific work with informants from the Philippine Islands and from the Eastern Woodlands of North America; and most of all, his Spartan living in various Algonquian speech-communities in the Great Lakes region and in Canada. Much has been said and no doubt will continue to be said about the 1933 Language; for purposes of our comparison, we observe that (1) despite a genuine proliferation in innovated terminology in Language,[1] the two terms which are most cited from Bloomfield's usage, which are most useful, and indeed which refer to nothing less than the minimum units of linguistic analysis, namely the *phoneme* and the *morpheme*, were already in the linguistic literature in 1933;[2] (2) linguists of the twentieth century up to 1933 were oriented and influenced by mentalistic terminology; after 1933, all rigorous work in structural linguistics is presented nonmentalistically; this result can be ascribed to Bloomfield's book more than to any other source. A terminology which is at all points definable, which prefers relative sterility (partial reporting,—sometimes very partial) to unattested assumptions, however suggestive or generally acceptable these may be—this kind of terminology received its principal impulse from the 1933 Language. If we equate this to scientific discourse, then the door of such discourse can be said to be opened to the study of certain human habits in their natural situations (psychologists who operate with the S-R formula, and whose work was the immediate stimulus for Bloomfield's formulations, also work with human habits but not in their natural situations,—rather under laboratory conditions which have been shown to yield good results with sub-human animals);

[1] C. F. Voegelin, A Sample of Technical Terms in Linguistics, IJAL 14.115–130 (1948).

[2] Whoever writes the History of Linguistic Science in the Twentieth Century will give us the details; my impression, gained largely from Rulon S. Wells, De Sausseure's System of Linguistics, Word 3.1–31 (1947), is that Baudouin de Courtenay used the term *morpheme* in the modern sense, and that de Sausseure used the term *phoneme*, more or less in the modern sense.

(3) Bloomfield's Language was received in as near to complete confidence as is possible in the scholarly world,—*by linguists*[3] (for those whose specialization was in IE, there was ample opportunity to form independent judgements and in this sense critically control the characteristic statements made by Bloomfield because he exemplified generously from IE languages;[4] so also for those whose experiences lay with unwritten languages: his roster of languages from primitive cultures exceeds those from civilized peoples); (4) Language time and again says that we cannot work with meaning until other specialists in the study of man catch up to the progress made in linguistics; while Language is virtually an encyclopedia of what is definitely known in linguistics, it studiously avoids mention, much less summary, of what is known in meaning. What is known about meaning is no doubt pre-scientific in Bloomfield's sense: 'In the study of man, pre-scientific modes of explanation hold sway; only small bits of territory have been gained by science, and the most promising of these is in linguistics.'[5]

In 1923, Kroeber published his prolegomenon (Anthropology); in 1948, he published his definitive work by the same title.[6] The author's scholarly activity which is most clearly reflected in the difference between the 1923 and the 1948 Anthropology is his concern with cultural details of high civilizations, culminating in his Configurations of Culture Growth, 1944. This work is classifiable as an anthropological exemplar of a genre associated with the names of Spengler, Sorokin, Sachs, Toynbee, Kroeber and Northrup; the high civilization of the writer is involved in the plot of this genre; accordingly, the anthropologist's contribution is the most difficult, if it is true that all anthropologists take an Hippocratic Oath promising to be non-ethnocentric.

Now to compare Anthropology in respect to the points observed for Language.

(1) Like a good historian, Kroeber eschews innovations in terminology. But he does not avoid technical terms widely used in anthropological literature; if anything, he uses the few terms which he has contributed to the literature, as *superorganic*, rather less than terms associated with other names in anthropology. He is explicitly critical of technical terminology, perhaps most so when an old term is used in a new sense, especially in a sense opposite

[3] Cultural anthropologists have generally not appreciated what Bloomfield's Language stands for; thus, one scholar, well known for his sympathetic inclusion of non-cultural interests in cultural anthropology, recently gave as his editorial reason for not including a linguistic paper in a symposium volume dealing with learned problems facing man and the modern world, his assumption that linguistic work is trivial. (For a preliminary answer: C. F. Voegelin and Zellig Harris, Linguistics in Ethnology, SJA 1.455–65 [1945]; The Scope of Linguistics, AA 49.588–600 [1947].)

[4] The value of this dual exemplification (in IE and in unwritten languages), like other prized things, is most strikingly shown when we come face to face with the lack of what is valued (and then taken for granted). Thus, Bloomfield did not deal conspicuously with sinological examples in Language; and now a highly competent sinologist is able to say 'To summarize: the linguistic methods used by Shafer may be applicable to the study of the language of the Bushmen. . . But the Chinese are not Bushmen. They wrote books. . .' (Pp. 123–4): Otto Maenchen-Helfen, History in Linguistics, JAOS 68.120–4 (1948); [a reply to] Robert Shafer, Linguistics in History, JAOS 67.296–305 (1947).

[5] Leonard Bloomfield, review of Wilhelm Havers, Handbuch der erklärenden Syntax, Lg. 9.32–40 (1934).

[6] One suspects the publisher rather than the author may have wished to add, as a subtitle to the 1948 edition, Race, Language, Culture, Psychology, Prehistory. This subtitle does not reflect the difference between the two editions. For the latter, there are eight new chapters in primatology (2), culture (7–11), cultural psychology (15), and American prehistory and ethnology (18). Otherwise the old frame is filled out with much new data and the latest interpretations—sometimes by Kroeber for the first time—as in physical anthropology and Old World prehistory. But two chapters remain essentially unchanged,—namely, the alphabet (13) and language (6).

to the traditional one (as in the use of *human nature* by social psychologists). Articulate to the point of being belletristic, he protests Toynbee's *etherealization*; would not *invention by reduction-segregation* cover the same ground, and have the additional virtue of making sense? (Perhaps the only technical term innovated in the entire 856 pages of Anthropology is reduction-segregation: '. . . a *reduction* of total compass of a system or activity through a segregation of its more valuable or efficient elements. . . . ') Kroeber equates certain terms coming from two different fields of specialization (*basic personality structure* = *modal personality*); and he can, when terminology pretends to say more than we know, be devastating ('This rather simple relation has sometimes been obscured . . . by technical jargon, such as "basic personality structure." . . . "Basic" is unfortunate, because to biologists "basic" means what is hereditary and congenital, whereas this kind of personality is induced by the culture, not primary. If "basic" refers merely to being typical or average, it would better be called that. "Structure" appears to be just a yielding to a word that has a perfectly good meaning but suddenly becomes fashionably attractive for a decade or so—like "streamlining"—and during its vogue tends to be applied indiscriminately because of the pleasurable connotations of its sound . . . in fact everything that is not wholly amorphous has a structure. So what "structure" adds to the meaning of our phrase seems to be nothing, except to provoke a degree of pleasant puzzlement . . . '). Withal, Kroeber introduces the beginner to technical terms currently used in anthropology, good and bad and indifferent.

(2) Everyone who has given a two or three semester introductory course in anthropology will be apt to agree that the first half of such a course is generally satisfactory, and texts like Kroeber's 1923 Anthropology prove generally adequate. Whatever the emphasis, the framework is chronological: from sub-human animals to the earliest evidence of man, physically and culturally, to the earliest historical times or to the ethnographic present. In contrast, the second half of an introductory course is apt to present a dilemma. Whatever the emphasis, the traditional topical treatment would include religion, political and social organization, economics, education, and perhaps other topics. Whatever the instructor's understanding of evolution might be, mere orderliness would call for a presentation in which mention of cultures with simple shamanism would precede those with priests and elaborate rites and temples; and so for the other topics, presentation would be apt to be from simple to complex, without theoretical commitment, merely to get cultural data out for display. But the very order in which the data were displayed led to uncontrolled, uncritical, naive impressions or implications of cultural evolution, however critically diffusion and acculturation, for example, were presented,—and apparently irrespective of whether lectures on diffusion and acculturation preceded or followed the topical treatment.

The 1948 Anthropology avoids topical treatment of culture; it gives more than enough systematic treatment of culture to fill the needs of the second half of an introductory course. Indeed, it introduces the beginner to most of the problems which are bothering professional anthropologists, tells of solutions and near-solutions to these problems, and sometimes points out what stands in the way of solving problems. But it does not get in its own way: it avoids both arguments and arrangements of data which in their substance or in their implications have to be unlearned.

Here is an example of such systematic and critical treatment. The personality-culture alliance is dissoluble: each may be studied independently of the other; by virtue of such independent study, correlations

between the two can be attested rather than assumed,—or negative correlations may be found. Culture has been traditionally studied in splendid isolation, as has language, and such studies are forever open to the charge of sterility (precise,—but so what?); personality interest has never gone far without being intertwined with culture. Now a preliminary assaying in the field suggests that the two can be profitably unscrambled, without workers being negative to personality interests or unduly partisan to culture.

(3) Systematic and critical frames, such as that paraphrased above, are richly inlaid with cultural detail. The 1948 Anthropology is equally exemplified from both primitive cultures and high civilizations. The value of this has already been remarked upon in reference to Bloomfield's dual exemplification in Language.

(4) Cultural anthropologists have, since Bloomfield's Language, given little evidence of appreciation or interest in linguistic analysis (and some evidence to the contrary: see fn. 3); it would seem sanguine to hope that linguists may be more successful in following Kroeber's exposition of culture. But more is at stake for linguists to understand culture than for culturalists to understand structural linguistics. In this context, culture and meaning are in large part equated.

Linguists characteristically operate with as little meaning as is indicated by distinctive features and meaning equivalence: but there are loose ends in such operational procedures, as I have tried to show in a recent paper.[7] One way to avoid such loose ends is to abandon all meaning, and this is very exciting;[8] another way is to introduce more meaning. But how? If anthropologists could identify units in culture in the same way that linguists can identify units in language, all would be well. They can not, or they do not. Bloomfield's advice is to hold meaning in abeyance in linguistic analysis until anthropologists (or others whose main business is culture and meaning) learn how to find definable units. This advice has been generally followed, and has served to make the intellectual climate of linguistics less humid. Naively understood, however, Bloomfield's advice may be read to mean 'Keep off the road to meaning until the green light appears showing that this (cultural) road is cleared of all mentalistic, metaphorical, non-operational *concepts*.' These not-to-be-underestimated impediments are very gradually being removed from the road to cultural understanding; but as some old ones are removed other new ones are erected. I have no confidence in green lights ever appearing.

What is at bottom disturbing to linguists is neither the occasional mentalism nor the frequent metaphor that culturalists use in place of the linguist's operational definitions; it is rather the different techniques which the two fields employ in finding their respective units.[9] Linguists can find their units in any one language, irrespective of where it is found in time or space. Culture unidentified in space and time is professionally meaningless to anthropologists. This is abundantly shown in the 1948 Anthropology; if reservations to including whole cultures in this statement are made, they have escaped me. See especially the criteria which Kroeber calls for in typology, and note that the index of the 1948 Anthropology is superlatively useful.

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[7] Distinctive Features and Meaning Equivalence, Lg. 24.132–5 (1948).

[8] Bernard Bloch, A Set of Postulates for Phonemic Analysis, Lg. 24.3–46 (1948); see also references to Zellig Harris, especially fn. 20, in Charles F. Hockett, Problems of Morphemic Analysis, Lg. 23.321–43 (1947).

[9] See under *The techniques of linguistics and cultural anthropology are in general different* in The Scope of Linguistics, AA 49.590–3 (1947).

PRESENT GENERAL TRENDS IN THE GROUPING OF AMERICAN ABORIGINAL LANGUAGES. By C. C. Uhlenbeck. Lingua 1.219–24 (1948).

IMPLICATIONS OF BLOOMFIELD'S ALGONQUIAN STUDIES. By Charles F. Hockett. Language 24.117–31 (1948).

THE NAVAHO. By Clyde Kluckhohn and Dorothea Leighton. Cambridge: Harvard University Press, 1946.

L'ESPAGNOL DANS LE NOUVEAU MONDE—PROBLÈME DE LINGUISTIQUE GÉNÉRALE. By Bertil Malmberg. Studia Linguistica 1.79–116 (1947).

SOME FRENCH LOAN-WORDS IN TUNICA. By Mary R. Haas. Romance Philology 1.145–8 (1947).

PHONEMES OF CARIBBEAN CREOLE. By Douglas Taylor. Word 3.173–9 (1947).

GRAMMATICAL PREREQUISITES TO PHONEMIC ANALYSIS. By Kenneth L. Pike. Word 3. 155–72 (1947).

STRUCTURE DES RELATIONS DE PERSONNE DANS LE VERBE. By Émile Benveniste. Bulletin de la Société de Linguistique de Paris 43.1–12 (1947).

MATTEO BÀRTOLI. By Giacomo Devoto. Word 3.208–16 (1947).

Uhlenbeck, in an article written explicitly for consumption by European colleagues, makes an introductory declaration warning against the overly facile assumption of a common origin of languages bearing structural similarities: the picture is usually more complicated than some prejudiced researchers have thought. The author then passes to a discussion of the general trends in the classification of American Indian languages, beginning with Powell's "conservative" report, and through familiar surveys by Hoijer, Voegelin, Rivet, and Schmidt (not however, including Hoijer's latest summary, VFPA 6.9–29 [1946], which embraces Central and South America as well). The fusion of several linguistic groups into ever widening stocks was initiated by Dixon and Kroeber, eventually joined by Sapir; Uhlenbeck confines his outline to Hokan and Penutian. With respect to the former, he agrees with Hoijer's doubts as to the existence of such a family; with respect to the latter, he recommends that it be referred to as a "provisional group" (but on Penutian see now IJAL 13.205–19 [1947]). In these remarks, Uhlenbeck essentially restates his position already expressed twenty years ago in these pages (IJAL 4.115 [1926]; 4.231–2 [1927]). As to Uto-Aztecan, he regards it as a firmly established family, and the common origin of Natchez and Muskogean as certain; but Na-dene and the supposed relationship between Siouan and Iroquoian are more doubtful, though will probably prove in the end to have been based on facts, according to the author. The tendency to find ever larger unities evoked a vigorous reaction, led by Boas, Michelson, followed by others.

Hockett's paper surveys Bloomfield's contributions, descriptive and historical, in the Algonquian field. His publications, listed, are taken as a jumping off point to discuss "those principles and procedures of historical and comparative linguistics which seem to emerge with especial clarity and force" from them. Sixteen of these principles are shown to be supported by Bloomfield's work in Algonquian.

In its linguistic aspects, the book on the Navaho shows the influence of Sapir in general, and of Whorf in particular. Remarks of ethno-linguistic interest are scattered throughout the work (e.g., on puns, p. 53), but the linguist will turn especially to chapter 8, The Tongue of The People (pp. 182–215), a clear and successful exposition of how Navaho classifies items of experience differently from English, and how this, in turn, leads to differences in behavior. Publications on Navaho linguistics since 1940 are listed on p. 252.

Much of recent Romance linguistics has revolved around two key concepts: sub-

stratum and superstratum. The problems raised by the changes in the various issues of Latin are not exclusively in the domain of the Romance field, but affect the linguists who study the languages spoken in any territory where speakers of a Romance language have penetrated and colonized or conquered. Thus, American Spanish linguistics concerns the students of Central and South American Indian linguistics as well. Malmberg, leaning on Alonso's research in part, outlines Lenz' theory of Araucanian substratum in Chile, which, in brief, states that Chilean Spanish is Spanish spoken with Araucanian sounds. Wagner's attitude was somewhat more tempered, and, later still, Entwistle has come to state that "the influence of American substrata ... has done no more than provide the names for exotic things ..." Thus, "substratum" has come to mean nothing more mystical than lexical borrowings. Malmberg gives the principal traits which characterize the Spanish of America as distinct from the Spanish of Iberia. These include ten phonetic, five morphological, and seven syntactic differences, plus the lexical ones. Two further observations are: all of these traits are also found, in some way or another, in Spain too; and none of the traits are found generally and uniformly distributed over the entire Hispano-American territory. This leads Malmberg to the conclusion that the history of Spanish in America is strikingly similar to that of Iberia, and that all the traits can be explained by linguistic tendencies known from the study of dialects in Spain. Thus no recourse need be had to the substratum theory at all.

Haas' study is of ten French loan-words in Tunica, a language well known from her grammar (1941). The brief introductory discussion is followed by fourteen points describing the changes which have taken place in the process of borrowing. Romance Philology is a new journal, the editor of which states that he will gladly accept Indiano-Romanic materials suitable for publication (write to Yakov Malkiel, 476 Wheeler Hall, University of California, Berkeley 4, California); as Haas' and Malmberg's articles show, this contact between the two fields has many possibilities.

Taylor shows that French West-Indian Creole differs considerably in its phonology from the French dialect whence it drew most of its vocabulary. Such differences are commonly attributed to the retention and transmission of West African speech habits; but Taylor suggests that Island Carib influences must also be taken into account: he notes throughout his paper certain of these phonetic effects.

Some linguists[1]—and Pike takes issue with them—"seem to have set as an ideal of phonological description and analysis the elimination of all reference to or reliance upon facts about the grammatical structure of the language being investigated". Pike shows that, in the field, simultaneous analysis is de rigueur. Also, certain steps in morphological analysis are prerequisites of phonemic analysis. The phonological characteristics of Mixteco morphemes serve to illustrate Pike's arguments.

Benveniste, dissatisfied with the traditionally paradigmatic descriptions of verbal systems, undertakes to examine a number of languages with a view to determining the principle whereby the persons are structured in the verb. Among American Indian languages he cites: Chinook, Eskimo, Fox, Nahua, and Siuslaw. This survey leads to two generalizations which do not seem very striking: (1) the correlation of personality sets off the persons *I*, *you* from the non-person "third person"; and (2) the correlation

[1] Pike singles out C. F. Hockett in particular, but his references are to Hockett's views of 1942. In Lg. 23.321–43 (1947), Hockett already refers to "the morphemically most desirable phonemic notation. . .", etc.

of subjectivity, included in the preceding, sets off *I* from *you*.

Both recent evaluations of the Neolinguistic position (Hall, Lg. 22.273–83 [1946], con., and Bonfante, ibid. 23.344–75 [1947], pro.), failed to bring out the interesting fact that Bàrtoli was one of the few Italian linguists (besides Trombetti and Tagliavini) who occupied himself with American Indian languages. Devoto, in a balanced and unbiased interpretation here, includes references to Bàrtoli's several papers where he tried to apply his "areal norms" to American Indian languages. Among the five references we single out two: Le origini degli Indiani d'America lumeggiate dalle aree linguistiche, Annali dell'Istituto superiore di magistero di Torino 335–52 (1934); and Ancora delle origini dei linguaggi precolombiani alla luce delle norme spaziali, Mélanges Van Ginneken 123–33 (Paris, 1937). (Cf. Devoto's fn. 14, p. 215 for the remaining references.)

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[1] This index lists only American Indian languages; the numbers refer to pages in Volume 14 of IJAL. Numbers followed by f. indicate that the language is mentioned not only on the page given, but also in the following pages of the same article or review; so also, if the language forms the main topic of the article or review, it is indexed by title page reference, with f.

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